



Securing Mountain Water and Livelihoods

Annual Report October 1, 2016 – September 30, 2017

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TABLE OF CONTENTS

1. EXECUTIVE SUMMARY	7
2. SUMMARY OF PROGRESS	11
Performance Monitoring Results	12
Project Implementation FY 2017 (valuation of progress)	18
3. MAIN ACHIEVEMENTS	28
R1. Improved knowledge	28
Strategy 1. Development of an information system	28
Strategy 2. UNASAM is providing information services	30
R2. Public Funds for water security in high-mountain communities of Ancash obtained	32
Strategy 3. Ancash Regional Climate Change Strategy	32
Strategy 4. Design and funding of public investment projects	34
Strategy 5. Women elected authorities climate change adaptation	35
R3. Improved capacities of communities to adapt to climate change and sustain livelihoods	36
Strategy 6 . ‘Mechanisms for the Retribution of Ecosystem Services’ (MRSE).	36
Strategy 7. Local innovative solutions	38
Implementation Challenges	44
4. PROJECT CONTEXT AND SUSTAINABILITY	44
5. PROJECT MANAGEMENT	45
Monitoring and Evaluation	46
Tracking Products and Detailed Implementation Plan	47
6. FINANCIAL REPORT	49
7. ANNEXES	53
Annex A. Tracking Table of Project Products	53
Annex B. Success Stories	67

ACRONYMS

ACC	Adaptation to Climate Change
ALA	Local Water Authority (ANA)
ANA	National Water Authority
APCI	Peruvian Agency for International Cooperation
CAMBIAR	Climate Adaptation in Andean Basins
CCA	Climate Change Adaptation
CC-A	Center for Water Competencies
CIAD	Environmental Investigation for Development Center
CONCYTEC	National Council of Science and Technological Innovation
COP	Chief of Party
CSA	Compensation for Environmental Services
CSU	Colorado State University
DGIIA	Direction General of Environmental Research and Information (MINAM)
DGIP	Direction General of Public Investment (MEF)
EIC	Component Implementation Teams
EPS	Potable Water Company
EWB	Engineers Without Borders
ERCC	Climate Change Regional Strategic
FCAM	Faculty of Environmental Sciences (UNASAM)
FINCyT	Fund for Innovation Science and Technology
FONIPREL	Promotional Fund for Local and Regional Public Investment
GI	Advocacy Group
GOR-Ancash	Regional Government of Ancash
GRRNGMA	Regional Office of Natural Resources and Environmental Management (GOR-Ancash)
HIMAP	High Mountain Adaptation Partnership (USAID)

ACRONYMS

IAP	Participatory Action Research
IBA	Andean Biotic Indicator
IDP	Institutional Development Plan
IMACC	Project Climate Change Adaptation Measures (MINAM-IDB)
INAIGEM	Glacier and Mountain Ecosystems National Research Institute
IPROGA	Institute for the Promotion of Integrated Water Management
IR	Intermediate Result
ISF / EWB	Engineers Without Borders
IT	Technological Institute
JUNTOS	National Program for Direct Support to the Poorest Population
LCA	Quality Environmental Laboratory
LAPA	Local Adaptation Plan of Action
LB	Baseline
LWA	Local Water Association
M & E	Monitoring and Evaluation
MEF	Ministry of Economy and Finance
MM	Municipal Commonwealth
MMTC	Tres Cuencas Municipal Commonwealth
MMW	Waraq Municipal Commonwealth
MEIA	Monitoring Evaluation and Impact Assessment
MINAM	Ministry of the Environment
MRSE	Mechanism for Retribution of Ecosystem Services
OGEYPS	General Office of Outreach and Social Projection (UNASAM)
NGOs	Non-Governmental Organization
PAAL	Plan of Action for Local Adaptation
PAR	Participatory Action Research

ACRONYMS

PCM-SD	Chair of the Council of Ministers-Secretary of Decentralization
PDI	Institutional Development Plan
PIP	Public Investment Project
PMP	Performance Monitoring Plan
PNH	Huascarán National Park
PUCP	Pontificia Universidad Católica de Perú
POA	Annual Operating Plan
POG	General Operating Plan
PSI	Sub-sectorial Irrigation Program
PUCP	Catholic University of Peru
REGEMA	Network of Commonwealth Managers
REMURPE	Peruvian Municipality Web
SAT	Early Warning System
SENAMHI	National Meteorology and Hydrology Service of Peru
SENASA	National Service for Quality and Health of Food Crops
SERFOR	Forest and Wildlife National Service
SERNANP	National Service of Protected Areas
SIAR-Ancash	Regional Environmental Information System of Ancash
SNIP	National System of Public Investment
SUNASS	National Superintendence of Water and Sanitation Services
TDC	Theory of Change
TMI	The Mountain Institute
SNIP	National Public Investment System
UGRH	Unit of Glaciology and Water Resources (ANA)
UNASAM	National University Santiago Antúnez de Mayolo
UNALM-LEUP	National Agrarian University La Molina. Ecology and Pasture Management Laboratory

ACRONYMS

UNMSM-TL	San Marcos National University-Remote Sensing Laboratory
UPCH-EL	Peruvian University Cayetano Heredia Eco-Toxicology Laboratory
USAID	United States Agency for International Development
USFS	US Forest Service
UTA	The University of Texas at Austin
UvA-IBED	University of Amsterdam - Institute of Biodiversity and Ecosystem Dynamics

I. EXECUTIVE SUMMARY

The Project Securing Mountain Water and Livelihoods aim was to improve communities' capacities for landscape management for the conservation of ecosystems and to contribute to human well-being in the context of climate change. This was done by implementing technical assistance and training activities through three components: (1) generating information for adaptation, (2) developing public investment to finance adaptation actions, and (3) increasing capacity and implementing actions for resilient communities. These components accomplish three main results through seven strategies, outlined in Table 1.

Component 1 activities improved the capacities of multiple institutions within Ancash to produce information that supports decision-making for adaptation. Information was generated through internships, improved research networks, and studies related to climate change and adaptation technologies and shared through a dedicated information system to stakeholders throughout Ancash.

Component 2 activities built capacity of local government and municipal commonwealth actors in Ancash to develop policies and actions that mobilize public investment for adaptation. These activities drew upon the most up-to-date information and emphasized capacity building for women leaders.

Component 3 activities linked highland and lowland communities and promoted grassroots, climate resilient actions through local participatory processes to strengthen the capacity of mountain communities to manage natural resources and water systems impacted by climate change.

Table 1. Securing Mountain Water and Livelihoods Project components, results, and strategies

Component	Strategy	Result
Component 1: Generating Information for Adaptation	Strategy 1: Develop a regional information system in Ancash, involving multiple stakeholders that support decision making in climate change adaptation	Result 1: Improved knowledge and management of territories, ecosystems and hydrologic infrastructures reduces risks and impacts of climate change in highland Ancash Region
	Strategy 2: Strengthen the capacities of the public university (UNASAM) to provide information services that support decision making for climate change adaptation	
Component 2: Developing Public Investment for Adaptation	Strategy 3: Formulate policies and instruments that support climate change adaptation at the level of the Regional Government and the territories of the Municipal Commonwealths	Result 2: Public Funds obtained for water security in high-mountain communities of Ancash
	Strategy 4: Develop capacities in municipalities, regional government, commonwealths and sectors of Ancash Region to design and fund public investment projects to support ecosystem conservation and irrigation systems	
	Strategy 5: Develop capacities among groups of women authorities to promote climate change adaptation actions that reduce the vulnerability of women and other highly vulnerable groups	

Component	Strategy	Result
Component 3: Actions for Climate Change Adaptation	Strategy 6: Institutionalize Mechanisms for the Compensation of Ecosystem Services (MRSE) in Huascarán Biosphere Reserve and National Park that benefit upland communities and ecosystems that regulate water for whole basins	Result 3: Improved capacities of communities to adapt to climate change, to improve the health of ecosystems, and to develop infrastructure that regulates water and sustain livelihoods.
	Strategy 7: Promote local innovative solutions identified through participatory action research process that reduce the stress on ecosystems and on social cultural attributes of community well-being	

In FY 2017, the project initiated its last year of implementation. TMI gave special consideration the continuity of results and to increase water security in the Ancash region. For example, TMI and UNASAM interns who had completed the program obtained a contract from CISAL, a Canadian program supporting municipalities in Ancash, to conduct a hydrological assessment of the upper watershed of Fortaleza River. The results will provide support to the design of public investment projects to secure water for this valley. Despite political instability in Ancash, we placed effort and succeeded in the institutionalization of key processes supported by the project, like the Good Governance Platform for Mechanism for Retribution of Ecosystem Services (MRSE) or the Regional Environmental Information System of Ancash (SIAR-Ancash). Thanks to the formal establishment of the SIAR the information products generated by the project are now available to the public together with numerous other studies on climate change and water security. The SIAR is now functioning as an important tool to support climate change adaptation in Ancash.

The internship program with senior year students from UNASAM had seven participants who conducted research on mountain ecosystem health, water regulation services and economic valuation in support of the development of MRSE projects in the Buin and Quillcay watersheds. This information, together with other studies from previous years was used to produce the final versions of three geography and adaptation handbooks, one for each municipal commonwealth.

55 studies comprising internship reports and project's special studies were edited and have been disseminated through different mechanisms that include the SIAR, TMI web site, and USAID DEC database. TMI organized two Open Houses (in May and July 2017) to disseminate project results in Ancash.

The six public investment projects completed during FY2016 obtained registration in SNIP in FY2017. TMI supported the activities conducted by Tres Cuencas Municipal Commonwealth to determine a source of money for the three green projects and one irrigation project in their territory. Four projects were presented and accepted by the Sierra Azul Fund. The other two by the provincial municipalities of Huaraz and Carlos Fermín Fitzcarrald. These projects were under review by Sierra Azul with the expectation that the profiles will be approved and financed in the 2018 budget. As a result of project support, the Provincial Municipality C. F. Fitzcarrald obtained \$2,921,605 from MINAGRI to implement one irrigation project in the community of Caninaco which had completed its local action plan for adaptation. The Early Warning System to alert Huaraz of glacial lake outburst floods (GLOF), a 3 million dollars' public investment project completed all of its requirements for funding but was not yet approved by the conclusion of FY2017.

Nonetheless, the project achieved 77% of its target of leveraging public and private funds to improve water security in Ancash.

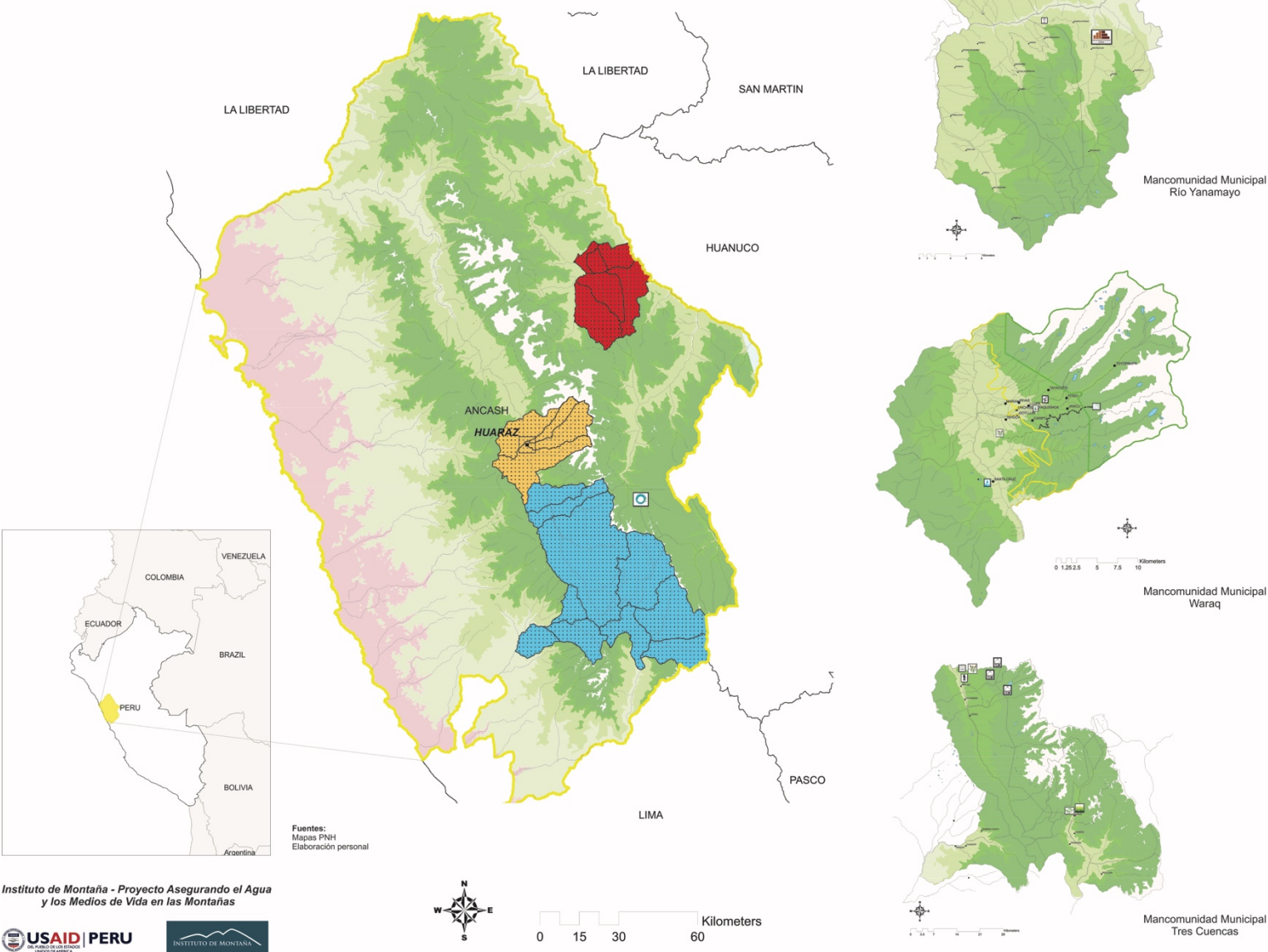
The cooperation with municipalities during FY2017 to implement small scale projects that enhance water security was highly successful. For example, the municipalities of Huaraz and Chavín co-financed the irrigation projects of Shallap and Shirapata, together with technical support of Engineers Without Borders. Similarly, the municipality of Raquia invested \$517,058 dollars for an irrigation project. The experience of working with municipalities showed us that water security actions at the local scale, if they have a low cost, can be supported quickly without complex bureaucratic steps and can be very effective. The experience of working with municipalities showed us that water security actions at the local scale, if they have a low cost of implementation, can be supported quickly by local governments without complex bureaucratic steps and can be very effective

Two Municipal Commonwealths and one Provincial Municipality completed their Local Adaptation Plans of Action (LAPA) and eight communities completed their Territorial Development Plans (PDT). These planning documents are important because they incorporate elements of the Regional Climate Change Strategy of Ancash. These plans provided the adaptation framework to implement 14 local research activities and 14 small scale projects with communities, co-financed by the project, municipalities and AGRORURAL. These small-scale projects included the improvement of existing irrigation systems by making small corrections to irrigation systems, restoring reservoirs or implementing pressurized irrigation systems to improve the efficiency of water use. One of this small-projects, the bio-remediation of water polluted with metals as a result of glacier recession in Shallap, is of particular interest because it replicated the technology developed by the farmer research group of Canrey Chico.

In conclusion, the project achieved all significant targets established in the Annual Work Plan. There is evidence of change in institutions, improvements in the level of information available to design public investment and/or MRSE projects aimed at improving water security in Ancash, and multiple cases of small-scale projects driven by local plans and supported by local governments. All these outcomes contribute, together, to the project aim: improve communities' capacities for landscape management for the conservation of ecosystems and to contribute to human well-being in the context of climate change.

MAP OF PROJECT SITE

Innovating Climate Change Adaptation in Ancash, Peru



2. SUMMARY OF PROGRESS

The following summary table shows of the contributions of the project to USAID standard indicators for reducing globally vulnerability to climate change. The set of USAID indicators captures results from several aggregated project activities. Following this summary table, we provide details on the disaggregated results and more detail descriptions of project activities and products can be consulted in the following section.

Table 2. Summary of USAID Indicators

USAID INDICATOR	DESCRIPTION	UNIT	Report Period April 1st– Sept 30, 2017			Target Year	Accumulated target year	% to date	Life of Project Target	Life of Project Actual	% of Life Project Target
			Target	Actual	% of Target						
USAID 3 4.8.2-14. Number of institutions with improved capacity to address climate change issues as a result of USG assistance	Municipal Commonwealths, Municipalities, National University, Social Organizations, Rural Communities, Women organizations, Laboratories, Public Institutions	Institutions	3	3	100.0	8.0	7.0	87.5	32.0	31.0	97.0
USAID 3 4.8.2-10. Amount of investment leveraged in U.S. dollars, from private and public sources, for climate change as a result of USG assistance.	Project Early Warning System, bioremediation, International Cooperation, Public Support, Volunteers, interchanges.	US \$	1	3.3	330.0	3.5	3.3	94.3	5.5	4.3	77.0
USAID 4.8.2-6. Number of people trained in climate change as a result of the US Government assistance	Women, Public officers, students, rural people and others (leaders and counselors) trained in gender and climate change	People	35	96	274.3	127.0	124.0	97.6	500.0	555.0	111.0
USAID GNRD-3. Proportion of women reported increased self-efficacy with training programs by the US government supported	Women and others (leaders and counselors) increased self - efficacy	Percentage	1	2.5	250.0	5.0	2.5	50.0	5.0	2.5	50.0
USAID 4.8.2-28. Number of laws, policies, strategies, plans, agreements or regulations addressing climate change (mitigation and adaptation) and / or biodiversity conservation proposals officially adopted or implemented as a result of the US Government assistance	Municipal commonwealths have Operative Plans and status of the network managers, Public institutions have trained officers, Rural communities have plans and agreement by implement actions in climate adaptation, social organizations have plans and actions implemented	Laws, policies and others	2	2	100.0	5.0	14.0	280.0	27.0	27.0	100.0
USAID C12. Number of people informed and sensitized on natural resource management,	Holding events, fairs, workshops, discussions and updating website (include Facebook) on	People	279	348	124.7	650.0	854	95.6	3100.0	2 965	95.6

USAID INDICATOR	DESCRIPTION	UNIT	Report Period April 1st– Sept 30, 2017			Target Year	Accumulated target year	% to date	Life of Project Target	Life of Project Actual	% of Life Project Target
			Target	Actual	% of Target						
biodiversity conservation and climate change as a result of USG assistance	activities in the fields of project										
USAID DO 3 C11. Number of studies and scientific research related to environmental issues which contribute to better management of natural resources as a result of USG assistance	Studies and research were developed by staff, volunteers, internships, consultants to understand the context and improve environmental management focused in ACC (diagnostics, studies, research, guides, work documents)	Studies, research, documents	5	7	140.0	12.0	13.0	108.3	40.0	47.0	117.5

Performance Monitoring Results

Since the FY2017 monitoring report corresponds with the last quarter and closing of the project, the following section presents the final data and assessment of performance concerning project's results and is the same as the Final Report of the project

Table 3. USAID 3 4.8.2-14. Number of institutions with improved capacity to address climate change issues as a result of USG assistance

Baseline Date	Baseline	Project Target	FY 2014 Result	FY 2015 Result	FY 2016 Result	FY 2017 Result	Total	DQA Date	Agency	Dropping Year
01/06/14	0	32	4	10	15	2	31	01/07/17	USAID	2017

How is the indicator related to Project objective

- This indicator documents the improved capacity of institutions to respond to climate change among: academic organizations, governmental organizations in charge of public policies that support climate change adaptation, like municipalities or municipal commonwealths and local communities that develop and implement actual solutions to climate change.
- Increased capacity of academic organizations to generate information (O1) is necessary to elaborate better public investment projects (O2) that support communities with the capacity to identify their adaptation objectives and interact with governments agencies to develop and implement solutions that reduce vulnerability to climate change (O3)¹

Current and Future performance analysis of the indicator

¹ OA1: Improved knowledge and management of territories, ecosystems and hydrologic infrastructure reduces risks and impacts of climate change in highland Ancash; OA2: Public funds obtained for water security in high mountain communities of Ancash; OA3: Improve capacities of communities to adapt to Climate Change, to improve the health of ecosystems and to develop infrastructure that regulate water and sustain livelihoods

- In Fiscal Year (FY) 2017 the Project reached a total of 31 institutions with increased capacity for climate change adaptation², disaggregated in the following way: 2 academic institutions, 5 local and regional governments, 5 communities 3 sector agencies, 2 associations, 14 community-based organizations. The project advanced with more intensity in FY 2015 (10 organizations) and FY 2016 (15 organizations) once all the diagnostic and training tools were completed.
- The improvement of capacities contributes to the performance of environmental networks like the Hydro-meteorological platform of INAIGEM, the Regional of Ancash (SIAR) or the Regional MRSE Good Governance Platform, cooperative arrangements that are a result of the project and respond to national policy.
- Training also improved the capacity of academic organizations (UNASAM) that have strategic value but also local research networks (AICA) that help connect research to practical needs of communities.

Narrative of Deviation

- The number of 31 institutions strengthened fulfilling the requirements established in the index of capacity building represent 97% of the target established for this indicator.

Table 4. USAID 3 4.8.2-10. Amount of investment leveraged in U.S. dollars, from private and public sources, for climate change as a result of USG assistance.

Baseline Date	Baseline	Project Target	FY 2014 Result	FY 2015 Result	FY 2016 Result	FY 2017 Result	Total	DQA Date	Agency	Dropping Year
01/07/17	0	5.5	0.014	0.019	0.5	3.7	4.24	20/08/2017	USAID	2017

How is the indicator related to Project Objective

- Leveraging funds from the private and public sectors is associated with training functionaries of government in Ancash at Regional and Provincial levels to develop capacities to produce project profiles for SNIP (O2.4); and to increased capacities of Municipal Commonwealths to make the necessary incidence to identify funds for implementation of SNIP project profiles (O2.6).
- One of the challenges in the environmental sector in Peru is that there are a large number of project profiles that are registered in SNIP, yet few obtain funding. Therefore, the Project contributes, through the strengthening of Municipal Commonwealths (O2.1), to increase their capacities to obtain funds for adaptation projects

Current and Future performance analysis of the indicator

- Through the end of FY 2017, \$4.24 million from public and sector private sectors were raised as a result of the Project (Annex 2). This represents 77% of the Project target.
- Public funds were leveraged only towards the end of the Project because of the intrinsic time involved in training to develop public investment profiles, registering the profiles in SNIP and then identifying the sources to pay for their implementation, usually in national or Regional budgets. In addition to the funds already secured, there are project investment

² The improvement is measured through an index covering 11 dimensions; each one has a value from 0 to 5 (described in the performance monitoring plan).

projects (PIPs) developed in the diploma course with MEF and through other mechanisms by \$7.7 million in the portfolio of Sierra Azul and \$7.5 million with Regional Government of Ancash for the Early Warning System against glacial lake floods and the provincial municipalities of Huaraz and C.F. Fitzcarrald.

- Although we have not included in the calculations of funds leveraged, the GLOF Early Warning System of Palcacocha was approved for a total of \$1.23 million dollars and is currently in the process of budget certification prior to implementation.

Narrative of Deviation

- By the end of FY 2017 we had achieved 77% of the target. As indicated above, securing funds for public projects (PIP) is a cycle that takes no less than 2 years. The fact that training to produce the PIPs could not start until year 2, put the target too near the end of the project cycle. One of the projects developed with project support (\$1.23 million) has not been added to the total because the budget certificate could not be obtained by September 30 the closing date of the project.

Table 5. USAID 4.8.2-6. Number of people trained in climate change as a result of US Government assistance

Baseline Date	Baseline	Project Target	FY 2014 Result	FY 2015 Result	FY 2016 Result	FY 2017 Result	Total	DQA Date	Agency	Dropping Year
30/06/17	0	500	22	197	236	100	555	15/08/17	USAID	2017
4.8.2-6a number (%) of men			11 (50%)	99 (50%)	154 (65%)	62 (72%)	326 (58%)	15/08/17		
4.8.2-6b number (%) of women			11 (50%)	98 (50%)	82 (35%)	38 (28%)	227 (42%)	15/08/17		

How is the indicator related to Project objective

- The people that received training and fulfilled the criteria established by USAID belonged to academic organizations (O1), governmental agencies or sub-national jurisdictions (O2) and rural communities (O3). The project aimed to train men and women in same proportion (50%). Training involves these three set of stakeholders because, as the Project's Theory of Change indicates there is a need to develop capacity in all these sectors to improve cooperation. The national climate change strategy of the GOP is highly decentralized and calls for increasing capacities at these three levels (research, policy and civil society), and also gender equity.
- Training courses were developed to respond to the unique needs of each set of stakeholders.
- The topics covered by training courses included: research skills, local research methods, glacial lake outburst flood (GLOF) risk assessment, design of public investment projects, facilitation of local development plans and gender and climate change.

Current and Future performance analysis of the indicator

- By end of FY 2017 there are 555 persons trained. Training is geographically disaggregated in the following way: Tres Cuencas Municipal Common Wealth (94 people); Río Yanamayo Municipal Commonwealth (44 people), Waraq Municipal Commonwealth (200 people) and other locations in Ancash (217 people). The higher proportion of people trained in Waraq is due to proximity to the city of Huaraz.

Narrative of Deviation

- The total of 555 people trained was 10% above the target. The increase was due to the programming of one additional training course in 2017 by University of Texas, Austin (UTA) to transfer GLOF methodologies for UNASAM, INAIGENM, ANA's Unit of Glaciology and Water Resources, among others.
- The target of gender parity deviated 16% from the target in favor of men. The tally in this indicator does not include the training directed exclusively to women (Indicator *GNRD-3*)

Table 6. USAID GNRD-3. Proportion of women reported increased self-efficacy with training programs supported by the US government

Baseline Date	Baseline	Project Target	FY 2014 Result	FY 2015 Result	FY 2016 Result	FY 2017 Result	Total	DQA Date	Agency	Dropping Year
30/09/14	0	5%	0	0	0	2.5	2.5%	30/07/17	USAID	2017

How is the indicator related to Project objective

- Increased self-efficacy measures the empowerment of women as actors who can propose policy actions to respond to climate change with a gender perspective (O2.7). Self-efficacy was measured disaggregated in parameters that women themselves identified as meaningful to them: overall performance, work, responding to climate change, livelihood, and political life. The target was to increase a self-perception of 5% on average across all parameters.

Current and Future performance analysis of the indicator

- All the women who participated in the training (100%) perceived an improvement on self-efficacy, although the improved average was only 50% of the target (2.5 of 5 points). Regidoras (women elected to municipal councils) perceived stronger progress in 'policy' performance, while women leaders of grassroots perceived stronger progress in self-efficacy in relation to their livelihoods'. The baseline and endline surveys were conducted with Regidoras and women leaders of 8 grassroots groups (Rayan, Yauya, Canchabamba, San Luis, Shirapata, Coyllur y Aquia).

Narrative of Deviation

100% of women perceived improvements in self-efficacy, although the average achieved in the level of improvement was 2.5 of the 5 points established as a target. Measuring self-efficacy in a quantitative way has proven to be extremely difficult because changes in group composition along the three years of the project hampered comparison between the baseline and end line.

Table 7. USAID 4.8.2-28. Number of laws, policies, strategies, plans, agreements or regulations addressing climate change (mitigation and adaptation) and / or biodiversity conservation proposals officially adopted or implemented as a result of the US Government assistance

Baseline Date	Baseline	Project Target	FY 2014 Result	FY 2015 Result	FY 2016 Result	FY 2017 Result	Total	DQA Date	Agency	Dropping Year
01/06/14	0	27	2	11	10	4	27	30/06/17	USAID	2017

How is the indicator related to Project objective

- Laws, policies, strategies and other normative actions generated as a result of the Project took place across academic institutions (O1) sub-national government agencies (O2) and communities that adopted resolutions in assemblies or through other formal mechanisms (O3).
- The relevance of these norms in the Project's Theory of Change is that these norms, developed at different sub-national levels, are the mechanisms that facilitate the implementation of national level directives to support climate change adaptation. Some of these norms are connected through result chains. For example, the Regional Strategy of Climate Change is articulated with the approval of Local Adaptation Plans of Action (PAAL) by the Municipal Commonwealths and with the approval of community level plans (PDT) and these with the Concerted Development Plans (PDC).

Current and Future performance analysis of the indicator

- As a result of project activities 27 norms of different type were approved or implemented: 2 in academic organizations (one agreement and one regulation); 13 in government organizations at sub-national level (1 Climate Change Strategy at Regional Level, 7 adaptation plans, 3 ordinances and agreements); 5 in agencies of different governmental sectors (4 agreements, and one regulation); and 7 in rural communities (Local Development Plans). Of the 27 normative actions 18 have been approved and 9 were proposed.

Narrative of Deviation

- 27 norms of different types were approved as targeted and as described in the definition of the indicator.

Table 8. USAID C12. Number of people informed and sensitized on natural resource management, biodiversity conservation and climate change as a result of USG assistance

Baseline Date	Baseline	Project Target	FY 2014 Result	FY 2015 Result	FY 2016 Result	FY 2017 Result	Total	DQA Date	Agency	Dropping Year
30/06/14	0	3100	273	917	1594	181	2,965	30/07/17	USAID	2017

How is the indicator related to Project objective

- The Project implemented multiple communication activities that were transversal to O1, O2 and O3. The campaigns to inform and sensitize people on climate change adaptation were conducted with the academic community and with the population in the territories of the municipal Commonwealths and rural communities. The activities were implemented through Workshops, Discussions, Fairs, Conferences and special events, among others.

Current and Future performance analysis of the indicator

- The number of people reached by the Project with messages steaming from Project results increased slowly, with the peak in years 2015 (917 people) and 2016 (1,594 people). In FY 2017, the numbers reached 181 who were more high-level decision-makers selected to share final Project products and results.
- The documentation of this indicator was limited to people that physically participated in events and signed a list of participants. Additionally, but not counted as part of the metrics of the indicators the Project Facebook had over 4,000 followers and 2 brochures on

Ecosystem Service conservation to secure the water of Huaraz city were distributed to 25,000 people in each occasion. These were not registered because of the difficulty of documentation.

Narrative of Deviation

The total number of people informed and/or sensitized was 2,965, 96% of the target (3,100 people).

Table 9. USAID DO 3 C11. Number of studies and scientific research related to environmental issues which contribute to better management of natural resources as a result of USG assistance

Baseline Date	Baseline	Project Target	FY 2014 Result	FY 2015 Result	FY 2016 Result	FY 2017 Result	Total	DQA Date	Agency	Dropping Year
01/04/14	0	40	0	12	27	8	47	15/08/17	USAID	2017

How is the indicator related to Project objective

- The Project supported the implementation of studies with university students through the internship program (O1.5), through more advanced research (O1.6), and of studies conducted by the project itself in support of objectives.
- The production of environmental and socio-economic information to support adaptation to climate change is poor in mountain regions. In the Project's Theory of Change the generation of information supports: The Regional Environmental Information System (SIAR), the Mechanisms for Ecosystem Service Retribution (MRSE), and the elaboration of Public Investment Projects (PIP).

Current and Future performance analysis of the indicator

- The studies completed included 8 environmental diagnostics; 3 studies for MRSE; 13 diagnostic studies of the natural resource base of several sites (land cover, hydrology, etc.); and 16 other studies conducted by the Project (e.g. hydrology inventories, climate index, etc.). There are 7 additional internship studies completed in the last quarter of the project that will be included in the final count.

Narrative of Deviation

- There were 47 studies completed, 20% above the target, with 21 of the 47 studies being completed through the internship program by UNASAM students (Annex 5)

Project Implementation FY 2017 (valuation of progress)

Result 1. Improved knowledge and management of territories, ecosystems and hydrologic infrastructures reduces risks and impacts of climate change in highland Ancash Region

Code	DESCRIPTION	PROGRAMMED					
		Fiscal Year 2017				Life of Project Target (%)	Life of Project Actual (%)
		October 2016 – September 2017		Total FY2017			
		P	E	P	E		
Result 1	Improved knowledge and management of territories, ecosystems and hydrologic infrastructures reduces risks and impacts of climate change in highland Ancash Region				26.91	100	95.10
Intermediate Result 1.1 (weighted average)						8.07	36.52
IR 1.1	The Regional Environmental Information System (SIAR) is operating and receives information from members of the “climate Information Platform”, UNASAM and other sources.	6	8	36	21	100	95
1.1.1	Establishment and operation of the advocacy group of the "climate information platform"	0	0	0	0	27	27
1.1.2	Implementation of a regional environmental information system (SIAR) with access to climate and hydrology tools developed by the project (climate indices, hydrology assessment tools, Map of GLOF risks in the region)	0	7	26	12	53	50
1.1.3	Improve management instruments of the environmental research center for development (CIAD) and others in the climate information platform improved for better generation of hydro-climatic information	5	0	6	5	13	11
1.1.4	Implementation of climate information for SIAR through project and various contributing suppliers of information	1	1	4	4	7	7
Intermediate Result 1.2 (weighted average)						6.38	12.63
IR 1.2	Center of Environmental Research for Development (CIAD) is a source of hydro-climatic information for SIAR	0.0	8.0	37.0	50.0	100.0	99.0
1.2.1	Improve cooperation of the Center of Environmental Research for Development (CIAD) with SIAR, INIGEM or other information providers in Ancash	0	0	20	20	67	67
1.2.2	Implement management plans of CIAD laboratories through innovative and sustainable approaches	0	1	2	1	4	3
1.2.3	Generation of certified hydro-climatic information and services according to the demands of users of SIAR	0	7	15	29	29	29
Intermediate Result 1.3 (weighted average)						0.70	0.51
IR 1.3	Institutions and communities have access to environmental and hydro-climatic information through SIAR	2	29	71	64	50	47

Code	DESCRIPTION	PROGRAMMED					
		Fiscal Year 2017				Life of Project Target (%)	Life of Project Actual (%)
		October 2016 – September 2017		Total FY2017			
		P	E	P	E		
1.3.1	Support development of cooperation agreements between MINAM and GOR Ancash to establish SIAR	2	2	20	13	45	39
1.3.2	Provide relevant information to potential stakeholders on adaptation to climate change and dissemination of the available information at SIAR and in partnership with UNASAM/INAIGEM	0	27	51	51	55	55
intermediate result 1.4 (weighted average)						3.93	16.25
IR 1.4	training program on climate change adaptation implemented has strengthened the capacities of students and faculty at UNASAM to support adaptation actions in Ancash	2.00	2.00	31.00	23.00	100.00	95.00
1.4.1.	Design training program in adaptation to climate change for faculty and students to meet the needs of research and information services	0	0	0	0	14	14
1.4.2	Development of training courses in Climate Change Adaptation (CCA) according to the needs identified	0	0	16	16	66	66
1.4.3	Elaboration of material and virtual learning space to reinforce training courses	2	2	15	7	20	15
Intermediate Result 1.5 (weighted average)						4.21	19.98
IR 1.5	Participants of the training internship in climate change adaptation are qualified to generate necessary, high-quality information	0	3	37	20	100	95
1.5.1	Develop the program of training internships (“pasantías”) for senior students in UNASAM	0	3	33	17	95	91
1.5.2	Training internship is institutionalized at the UNASAM level and with other interested partners	0	0	4	3	5	4
Intermediate Result 1.6 (weighted average)						0.16	1.12
IR 1.6	Cooperative Research Group in Adaptation (GCI) in High-Mountain Ecosystems implements climate change adaptation projects in Ancash Region	1	5	30	14	100	100
1.6.1	Implementation of the Cooperative Research Group in Adaptation and preparation of the regional environmental research agenda	0	3	12	9	59	59
1.6.2	Organize meetings between the sub-groups of the Cooperative Research Group on Adaptation to High Mountain Ecosystems to develop research projects	1	2	18	5	41	41
Intermediate Result 1.7 (weighted average)						1.31	4.45
IR 1.7	UNASAM recognized as provider of information and technical assistance for climate change adaptation in Ancash	6.3	8.0	17.7	28.0	100.0	95.0
1.7.1	Training of interns and other actors in ArcGIS on-line	12	12	25	12	74	74

Code	DESCRIPTION	PROGRAMMED					
		Fiscal Year 2017				Life of Project Target (%)	Life of Project Actual (%)
		October 2016 – September 2017		Total FY2017			
		P	E	P	E		
1.7.2	Disseminate reports of internships/research to local governments, municipal commonwealths, SIAR and others	7	12	27	15	23	18
1.7.3	Strengthen UNASAM -OEUYPS program of volunteers as well as other sources through cooperation with the climate platform and other project components	0	0	1	1	3	3
Intermediate Result 1.8 (weighted average)						2.15	3.64
IR 1.8	Develop a system for collecting and reporting water quality information to rural communities through students using smartphone applications	7	13.5	29.5	59	100	100
1.8.1	Design, develop and validate a telephone app for collecting and reporting water quality information through university students	14	20	34	34	68	68
1.8.2	Institutionalize the strategy to develop Apps to support climate change adaptation with UNASAM and other partners	0	7	25	25	32	32

Result 2. Public Funds for water security in high-mountain communities of Ancash obtained

Code	DESCRIPTION	PROGRAMMED					
		Fiscal Year 2017				Life of Project Target (%)	Life of Project Actual (%)
		October 2016 – September 2017		Total FY2017			
		P	E	P	E		
Result 2	Develop a program in public investment to support local adaptation plans of action				13.20		89.97
Intermediate Result 2.1 (weighted average)						4.71	17.45
IR 2.1	Municipal Commonwealth Support Group constituted	6	17	20	27	100	100
2.1.1	Establish a support Group with pilot Municipal Commonwealths to strengthen and develop cooperation among them	6	17	20	27	100	100
Intermediate Result 2.2. (weighted average)						0.66	1.86
IR 2.2	Local Adaptation Plans of Action (PAAL) developed and updated for the pilot Municipal Commonwealths	7	6	33	33	100	93
2.2.1	Training of Municipal Commonwealths and municipal staff in the elaboration of Local Adaptation Plans of Action (PAAL).	7	6	33	33	100	93
Intermediate Result 2.3. (weighted average)						2.34	8.89
IR 2.3	Regional Climate Change Strategy (ERCC) of Ancash elaborated and proposed policies and actions incorporated in the Regional Concerted Development Plan (PDC)	25	10	23	25	100	95
2.3.1	Ancash Government develops its Regional Climate Change Strategy (ERCC) with support of MINAM	25	10	23	25	100	95
Intermediate Result 2.4. (weighted average)						0.00	41.52
IR 2.4	Technical staff of Ancash Region, local governments and sectors have been trained and elaborated “green” and irrigation SNIP projects incorporating risk management and climate change context	0.00	0.00	8.00	0.00	100.00	92.00
2.4.1	Organization of the Diploma in “green” and irrigation SNIP projects for the training of public functionaries of Ancash	0	0	0	0	41	41
2.4.2	Implementation of the Diploma course to elaborate SNIP projects at profile level incorporating risk management in a climate change context	0	0	0	0	18	18
2.4.3	Develop support tools for analysis of risk management and climate change context for the elaboration of “green” and irrigation SNIP projects	0	0	8	0	41	33
Intermediate Result 2.5. (weighted average)						0.45	1.15
IR 2.5	Model of alliance University-Government to support continuity of “hands-on” training in development of public investment projects with a focus on risk management and climate change context	58	6	34	9	100	23

Code	DESCRIPTION	PROGRAMMED					
		Fiscal Year 2017				Life of Project Target (%)	Life of Project Actual (%)
		October 2016 – September 2017		Total FY2017			
		P	E	P	E		
2.5.1	Coordination with MEF and UNASAM for continuation of the Diploma in “green” SNIP projects in the Ancash Region	5	0	7	3	8	5
2.5.2	Development of agreements with the Regional Government and municipalities to participate and support the continuity of Diploma training and elaboration of “green” SNIP projects	47	6	18	6	77	18
2.5.3	Elaborate lessons learned document regarding the implementation of the Diploma on the “green” and irrigation SNIP projects with risk management in a climate change context	6	0	9	0	15	0
Intermediate Result 2.6. (weighted average)						0.72	0.97
IR 2.6	SNIP “green” (grassland and wetland) and irrigation projects formulated in the Diploma have been budgeted and financed	49.00	32.00	54.00	72.00	100.00	97.00
2.6.1	Specific technical assistance and follow up of the PIPs elaborated in the Diploma during the process of inscription in SNIP	0	0	10	8	32	32
2.6.2	Public Investment projects developed in the Diploma have been assigned funding	6	14	29	32	32	32
2.6.3	Municipal authorities complete the bidding process to implement “green” and irrigation projects designed in the Diploma	43	18	15	32	36	33
Intermediate Result 2.7. (Weighted average :)						1.58	12.67
IR 2.7	Women authorities in local governments have proposed and implemented policy initiatives and projects to reduce climate change impact on women in their municipalities or commonwealths	37	11	5	12	100	96
2.7.1	Design training to strengthen the capacities of women serving in municipal councils and female leaders to promote gender inclusion and awareness of climate change impacts on women	1	0	4	1	10	6
2.7.2	Conduct training program to strengthen the capacities of women serving in municipal councils: focus on gender and public administration (command of planning and budget procedures and state administrative systems)	34	11	0	11	56	56
2.7.3	Conduct training of women councilors and local leaders in Gender and Climate Change: developing small projects lead by women as a learning tool on climate change adaptation actions	2	0	1	0	17	17
2.7.4	Technical assistance to women groups to prepare new initiatives on climate change adaptation based on their learning experience with small climate change actions	0	0	0	0	17	17
Intermediate Result 2.8. (weighted average)						2.73	5.46

Code	DESCRIPTION	PROGRAMMED					
		Fiscal Year 2017				Life of Project Target (%)	Life of Project Actual (%)
		October 2016 – September 2017		Total FY2017			
		P	E	P	E		
IR 2.8	The network of women councilors (Red de Regidoras) disseminates its experience with national support groups or national agencies	3	8	39	39	100	78
2.8.1	Technical assistance as required to support the elaboration of gender-sensitive policies for climate change adaptation	3	0	0	0	22	0
2.8.2	Documentation of experience of the women working on gender and climate change adaptation through “Participatory Video” methods	0	8	39	39	78	78

Result 3. Improved capacities of communities to adapt to climate change, improve the health of ecosystems and develop infrastructures that regulate water and sustain livelihoods

Code	DESCRIPTION	PROGRAMMED					
		Fiscal Year 2017				Life of Project Target (%)	Life of Project Actual (%)
		October 2016–September 2017		Total FY 2017			
		P	E	P	E		
Result 3	Replicate methods of climate change adaptation at the community level and disseminate training systems at the university and local government levels (weighted averages IR 3.1 + IR 3.2 + IR 3.3 + IR 3.4)				48.05		93.87
Intermediate Result 3.1 (weighted average)						0.39	1.89
IR 3.1	Institutionalized Mechanisms for Retribution of Ecosystems Services (MRSE) with recognized and trained advocacy group	0.00	1.00	29.00	18.00	100.00	87.00
3.1.1	Formation of a recognized, informed, Advocacy Group with work plan, agreements and partners to promote MRSE	0	0	0	0	8	8
3.1.2	Strengthening of the MRSE Advocacy Group	0	1	29	18	82	69
3.1.3	Integration of MRSE in management of Huascan Biosphere Reserve (RBH) in the MASTER PLAN (MP) (Advocacy Group participates in the MP, key staff of Huascan National Park (PNH) participates in training)	0	0	0	0	10	10
Intermediate Result 3.2 (average of activities)						0.00	1.89
IR 3.2	The Advocacy Group (GI) has documented scenarios that have baseline studies to support community projects for water security.	0	0	0	0	100	100
3.2.1.	Definition of key actors, water suppliers and water users in the area of project implementation	0	0	0	0	58	58
3.2.2.	Definition of priority areas of intervention for the Advocacy Group in the project area of implementation	0	0	0	0	42	42
Intermediate Result 3.3 (weighted average)						0.93	2.22
IR 3.3	Potential stakeholders of MRSE willing to develop cooperation agreements in the RBH	37	7	33	25	100	60
3.3.1	Sensitize and train private stakeholders that are beneficiaries of ecosystem services (SE) in the MRSE strategy	17	7	20	22	50	40
3.3.2	Sensitize and train key communities on the MRSE strategy and articulate them to the MRSE processes together with their local governments	20	0	13	3	50	20
Intermediate Result 3.4 (average of activities)						1.14	1.14
IR 3.4	MRSE management committees formed in defined priority areas of the RBH	33	23	68	60	100	60

Code	DESCRIPTION	PROGRAMMED					
		Fiscal Year 2017				Life of Project Target (%)	Life of Project Actual (%)
		October 2016– September 2017		Total FY 2017			
		P	E	P	E		
3.4.1	Connect upland communities and municipalities that conserve ecosystems that regulate water with stakeholders of the larger watershed that benefit from conservation to discuss the MRSE strategy	33	23	68	60	100	60
Intermediate Result 3.5 (average of activities)		0.10				2.57	
IR 3.5	Diagnostic information to support development of adaptation actions (IAPS, small projects, innovative tools for decision making).	0.00	1.00	4.00	4.00	100.00	100.00
3.5.1.	Conduct Rapid Rural Appraisals with a focus on climate change in representative watersheds of the three municipal commonwealths	0	0	0	0	64	64
3.5.2.	Perform analysis of local perceptions of vulnerability to climate change in representative sites of the three municipal commonwealths (in cooperation with UNESCO)	0	0	0	0	30	30
3.5.3	Preparation on synthesis and orientation documents for Municipal Commonwealths in web-ready formats describing their territory, threats of climate change to their ecosystems, water infrastructure and livelihoods	0	1	4	4	6	6
Intermediate Result 3.6 (average of activities)		16.92				26.44	
IR 3.6	Communities have established Participatory Action Research actions (IAP) at low cost and on priority issues that contribute to adaptation to climate variability and change	9	17	56	64	100	100
3.6.1.	Supporting the development of Participatory Research actions (IAP) on topics related to wetlands, grasslands, and agro-pastoral production systems that are climate change and other direct threats.	1	0	0	1	4	4
3.6.2.	Implementation of IAPs that contribute to reduce threats of climate change and other direct threats affecting mountain ecosystems and livelihoods	8	17	56	63	96	96
Intermediate Result 3.7 (average of activities)		4.48				4.48	
IR 3.7	Research results have been shared and communicated among community groups in the area of influence.	20	20	80	80	100	80
3.7.1.	Validation and dissemination of the results of IAP through 'Participatory Video'	20	20	80	80	100	80
Intermediate Result 3.8 (average of activities)		0.89				4.67	
IR 3.8	Communities and community-based groups have defined their development objectives, climatic and non-climatic threats to their territories and means of livelihood	38	19	0	19	100	100

Code	DESCRIPTION	PROGRAMMED					
		Fiscal Year 2017				Life of Project Target (%)	Life of Project Actual (%)
		October 2016–September 2017		Total FY 2017			
		P	E	P	E		
3.8.1.	Communities and community-based organizations in pilot sites have leaders trained to identify, design and propose projects using climate proofing tools.	0	0	0	0	53	53
3.8.2.	Elaborate Local Adaptation Plans of Action (PAAL) identifying a project portfolio in pilot sites	38	19	0	19	47	47
Intermediate Result 3.9 (average of activities)				0.48		2.44	
IR 3.9	Package of innovative tools to support decision-making and climate proofing in the design of community projects developed	0	0	65	13	100	66
3.9.1.	Elaboration of community handbooks ('Cuadernos Metodológicos') to support adaptation planning at community levels	0	0	65	13	100	66
Intermediate Result 3.10 (average of activities)				17.66		37.24	
IR 3.10	Community projects focusing on reducing climate hazards and/or adaptation measures implemented in pilot sites (if small scale with project funds and if larger scale presented to national funding sources)	10.00	11.00	68.00	46.00	100.00	97.00
3.10.1.	Selection of priority adaptation projects and their respective sources of funding by the communities.	0	0	0	0	5	5
3.10.2.	Implementation of community local adaptation actions with TMI project funds.	9	9	64	42	91	89
3.10.3	Implementation by Government of Peru agencies working in rural development of priority adaptation projects that incorporate climate proofing and have been developed by communities	1	2	4	4	4	3
Intermediate Result 3.11 (average of activities)				1.21		2.69	
IR 3.11	Financial institutions have incorporated, in its portfolio of funding, projects developed with communities under an ACC focus	0	7	35	45	100	100
3.11.1.	Identification of funding sources for communities	0	7	35	45	100	100
Intermediate Result 3.12 (average of activities)				3.85		6.20	
IR 3.12	Technological institutes (Institutos Tecnológicos) incorporate research methods and professional training contextualized for the implementation of small projects and IAP with an adaptation to climate change (ACC) approach	0.00	0.00	43.00	62.00	100.00	100.00
3.12.1.	Develop agreements with stakeholders to strengthen Technological Institutes as a mechanism to promoter local adaptation to climate change	0	0	0	0	20	20
3.12.2.	Training of teachers and students on tools for the identification, design and management of climate change adaptation projects	0	0	20	39	40	40

Code	DESCRIPTION	PROGRAMMED					
		Fiscal Year 2017				Life of Project Target (%)	Life of Project Actual (%)
		October 2016– September 2017		Total FY 2017			
		P	E	P	E		
3.12.3.	Implementation of climate proofed, small scale projects by the Technological Institutes	0	0	23	23	40	40

3. MAIN ACHIEVEMENTS

RI. Improved knowledge and management of territories, ecosystems and hydrologic infrastructures reduces risks and impacts of climate change in highland Ancash Region

Development of an information system that support adaptation in Ancash region (Strategy I)

IR 1.1. The Regional Environmental Information System (SIAR) is operating and receives information from members of the climate Information Platform, UNASAM and other sources.

During FY 2017, the result was completed as expected. The system is well organized, the technical teams trained and a framework agreement to provide continuity to the system has been signed with Ancash Regional Government (GORE Ancash). The main activities completed include:

- Development of an ordinance and technical report for the implementation of the SIAR which has been approved in the month of December 2016 (Annex 1).
- Coordination with the Ministry of the Environment to create the SIAR Ancash page in MINAM's website. The project produced the document "Handbook of procedures and recommendations for the generation, storage and dissemination of meteorological and climatic information of the Ancash region".
- Organized, together with the Natural Resources and Environment Management Office of the GORE Ancash, presentations on the SIAR to Regional Councilors to gain their support to approve the ordinance.
- With participation of MINAM, the project organized training sessions for the to the new team of the Natural Resources Management of Ancash on the development and management of the SIAR web page
- Framework and specific agreements signed with the new authorities of the Regional Government to activate and give continuity the SIAR. The SIAR was presented in the project's "Open House" to the public and decision-makers (Annex 2)
- Initial development of the first Local Environmental Information System (SIAL) of Ancash with the District of Huari (this municipality agreed to prepare a Public Investment Project to implement its system).
- Publication of scientific studies to inform stakeholders and decision makers. These included: presentation of the results of the studies of UTA on alluvial risk; publication in the indexed journal of UNASAM "Aporte Santiaguino", of an article on restoration of bofedales in Huascaran National Park; hydrological inventory of the headwaters of the Fortaleza river basin elaborated with financial support of the Canadian NGO CISAL; two documents resulting from UTA's technical assistance,

both by Dr. Rachel Chisolm: “Hydrological Analysis of Shallap” and “Climatic Indices of the northern section of the Cordillera Blanca”.

R 1.2. Center of Environmental Research for Development (CIAD) is a source of hydro-climatic information for SIAR

CIAD and the water quality laboratory (LCA) completed their management plans. The plans are under implementation and as a consequence CIAD is a source for hydro climatic information for Ancash. The main activities and products carried out during the year include:

- The Center for Water Competencies (CC-A) was the consultant group that provided technical assistance to complete the management plans of CIAD and LCA. These plans include a roadmap for the search of external financing; recommendations for simplifying administrative processes under the scenario of a private foundation in UNASAM; and the proposal of a financial model for CIAD.
- CC-A and TMI staff organized technical meetings with the dean of the School of Environmental Sciences of UNASAM and the staff of CIAD and LCA to discuss the implementation of the management plans (Annex 3). Similar meetings were organized with UNASAM authorities to foster support for the implementation of the management plans.
- Several actions were carried out to support the implementation of CIAD's plans: (i) coordination with the University of Zurich for the installation in UNASAM of a Micro Rain Radar (MRR); (ii) development of the CIAD web site through an internship; (iii) and a theoretical and applied course in meteorology organized by the CIAD. A volunteer from the Systems Engineering Faculty helped with the development of CIAD's website, and two interns worked at organizing its climate data bases to make them accessible to the public. Finally, University of Zurich and the team of the Future Water project of the University of Stuttgart discussed inter-institutional cooperation and future research projects with CIAD. This was an activity identified in their management plan. Subsequently, a workshop was held on data processing and operation of the micro radar, presented by researchers from the universities of Zurich and Stuttgart.

IR 1.3. Institutions and communities have access to environmental and hydro-climatic information through SIAR.

The SIAR was established, it is staffed by trained personnel from the Regional Government, and is now providing information to support climate change adaptation efforts in Ancash. A collection of information has been carried out among the different institutions. TMI the following activities:

- The technical group or platform to support the exchange and circulation of environmental and climatic data was established in the third meeting of the group. The group will monitor the development of the SIAR and promote cooperative activities for the exchange of information.

- Several of the actions programmed by SIAR's Implementation Work Plan were carried out with support of the platform: (i) organization, together with the Natural Resources Management Office of GORE Ancash, of a workshop to elaborate environmental indicators and discuss administration of the SIAR ; (ii) a technical committee was set up to provide long-term support to the SIAR Ancash.
- A letter of request for environmental information was prepared for the different regional institutions to obtain and circulate information through the SIAR. Organizations providing information to SIAR include INAIGEM (Area of Information Management) and FCAM. TMI also conducted a communications campaign through Facebook and bookmarks to disseminate SIAR's contents and web page address.
- A workshop was organized with MINAM and multiple public and private organizations of Ancash to construct the environmental indicators that will be monitored by SIAR. In this way, local organizations will be more inclined to both support and use SIAR as a management tool.
- The meteorology smart phone application code was handed out to INAIGEM's information management area. The concept is to use the app to disseminate not only hydro-climatic CIAD data but also INAIGEM's.

UNASAM is providing information services to support climate change adaptation in Huascarán Biosphere Reserve (Strategy2)

The internship program was completed successfully during this third year. Students were trained in the use of Arc Gis on line and embedded in public agencies like INAIGEM and CIAD (Annex 4) . The concept of internships was introduced to the Canadian program CISAL ("Inclusive and Sustainable Communities in Latin America") to support a group of municipalities in Ancash who needed to conduct a hydrological assessment of the upper watershed of Fortaleza River. The results will provide support to the design of public investment projects to secure water for this valley. The significance of these action is that it demonstrates that local governments can access technical resources within Ancash at a relatively low cost.

TMI hosted meetings with UNASAM to elaborate a research proposal for CONCYTEC "Circles" program to foster research on; TMI also facilitated contacts between UNALM professor Francisco Espinoza and UNASAM researchers to prepare and apply to research funds financed with the mining canon taxes (project title "Monitoring the quality and quantity of water in the Yauya area". None of the projects managed to obtain funding.

IR. 1.4. Training program on climate change adaptation implemented has strengthened the capacities of students and faculty at UNASAM to support adaptation actions in Ancash

The program concluded in this FY2017 the training of UNASAM students with a workshop lead by UTA on methodologies to assess the risk of glacier lake outburst floods (GLOF). The workshop resulted in the elaboration of maps that identified the risk of glacier lake outburst floods in areas identified by INAIGEM as dangerous. Additionally, four UNASAM interns received training on glacier risk management from the Glaciers + project (CARE / University of Zurich). It consisted of three days of theory and a field trip to assess risk. Subsequently, what was learned was shared through a workshop with fellow interns who

did not attend the training. TMI used a web-based educational platform developed through the project to train interns.

IR. 1.5. Participants of the training internship in climate change adaptation are qualified to generate necessary, high-quality information

The last 8 internships were completed in FY2017 (Annex 4), totaling 21 applied investigations in support of Ancash's climate change adaptation during the project cycle. The program followed the same process as in previous years, providing trainees with tools to work with communities and to improve their scientific writing.

TMI shared the results of the internship program in events organized by UNASAM's network "Environmental Research Incubator" (Semilleros de Investigación Ambiental, SIAM). TMI-UNASAM interns shared their experience and results in research to foster interest among other students.

TMI explored mechanisms for the continuity of the internship program with the Vice-Rector for Research of UNASAM. The university is interested in the promotion of research but needs to identify the source of funds for this initiative. TMI invited former interns to complete a study commissioned by the Canadian NGO CISAL to diagnose the hydrology of the upper Fortaleza River.

IR. 1.6. Cooperative Research Group in Adaptation (GCI) in High-Mountain Ecosystems implements climate change adaptation projects in Ancash Region

TMI promoted cooperation with Peruvian and international universities to increase opportunities for UNASAM students and faculty to participate in climate change adaptation research in Ancash. The following grants were secured in FY2017:

- The National Science Foundation approved a 4-year grant to study the interactions of cattle and wetlands in Cordillera Blanca. TMI participates in this research with Colorado State University, the University of Texas at Austin and Michigan Technological University (2017-2021). UNASAM students participate in field research activities.
- The McKnight Foundation grant to study grassland management problems which was approved in FY2016 provided opportunities for UNASAM students to train in research during FY2017.
- The National Program of Agrarian Innovation (PNIA) approved a grant for the conservation of the Páramo ecosystem in northern of Peru through the promotion of the sustainable use of medicinal plants (2017-2018)
- The National Program of Agrarian Innovation (PNIA) approved a project lead by the Laboratory of Grassland Ecology and Utilization at La Molina Agrarian University (LUEP-UNALM) to develop methods to assess the condition of puna grasslands in a context of climate change.

IR. 1.7. UNASAM recognized as provider of information and technical assistance for climate change adaptation in Ancash

TMI coordinated closely with UNASAM's Social Responsibility office (OEUYPS), promoting the inclusion of climate change as a priority area of support to be provided by volunteers. TMI also presented the results of UNASAM interns' work to the hydroelectric company Orazul (formerly Duke Energy), Huascarán National Park, the Canadian NGO CISAL, and INAIGEM to promote the use of UNASAM students as a mechanism to generate information for climate change adaptation objectives.

IR. 1.8. Develop a system for collecting and reporting water quality information to rural communities through students using smartphone applications

During FY2017, TMI provided support to UNASAM students to develop a second smart phone application to access CIAD's weather data bases. TMI assigned an internship to develop this application to access the information collected by CIAD. Through this application, users can access basic real-time and weather and forecasts for maximum and minimum temperatures, rainfall, humidity, wind speed and UV radiation. The app was developed in collaboration with the CIAD through the UNASAM internship and the mentorship of a UNASAM's Systems and Computer Science graduate. CIAD is responsible for updating the information weekly according to the meteorological forecasts. The tool is useful to a broad Ancash public, including urban and rural residents, farmers, and researchers. CIAD continues to improve and expand the services provide by this App. For example, CIAD worked with the volunteer Libby Mosto, to collect information on traditional local meteorological knowledge with the idea is to incorporate this information in the App and create in a virtual forum where people can share their traditional knowledge about climate.

UNASAM student Fiorella Quiñonez, who conducted a water quality study using the macroinvertebrates App in the Rio Yanamayo Municipal Commonwealth and in the community of Aquia, prepared a water monitoring handbook to be used with the macroinvertebrates App which was originally developed in FY2016. The macroinvertebrates App was presented at the Water Fair, organized by SUNASS in Ancash.

R2. Public Funds for water security in high-mountain communities of Ancash obtained

Ancash Regional Climate Change Strategy: policies and instruments that support climate change adaptation at the level of the Regional Government and the territories of municipal commonwealths of Ancash (Strategy 3)

The main policy framework and instruments to support climate change adaptation in Ancash, the Regional Strategy of Climate Change (ERCC) and the Concerted Regional Development Plan (PDRC), was completed the previous fiscal year. TMI continued cooperating with the Regional Government to disseminate the results of the strategy through the publication of a short, 'friendly', version' and working with several offices in the Regional Government to promote the implementation of the ERCC. TMI then provided technical assistance to the Tres Cuencas and Waraq Municipal Commonwealths and to the Provincial Municipality of C. F. Fitzcarrald to complete Local Adaptation Plan of Action

(LAPA) in coordination with MINAM. These plans take the Regional strategy as a general framework and identify specific actions in the territory. The LAPA were also based on geographic information studies that have been published for each one of these three regions.

IR. 2.1. Municipal Commonwealth Support Group constituted

The two municipal commonwealths that were supported by the project performed in their functions adequately and cooperated with each other during FY2017 with sufficient financial support to cover the salary of the manager and allocating staff time in the planning and budget offices to develop public investment projects. Examples of activities conducted by the municipal commonwealth managers in coordination with TMI include: participation in the promotion of the establishment of the Watershed Council of Fortaleza River; participation in the Rio Fortaleza 'Technical Water Board' and support of the hydrologic inventory of the upper sections of Fortaleza and Rio Santa watersheds; advocacy in Congress to promote public investment in water security; incidence with the Ministry of Environment to expand FONIPREL to cover 'green' or ecosystem service projects in that funding source; participation in technical studies like the Ecological Assessment (DIA) of the 'Early Warning System', with SNIP code N ° 287394 (Annex 6); regular coordination with the office of Natural Resources and Environment in GORE Ancash; multiple meetings with the Sierra Azul Fund to launch the program in Ancash and to seek support for the portfolio of 'green' and irrigation public investment projects and also the allocation of funds for small water security interventions with rural community groups ('*Núcleos Ejecutores*'); development of new public investment projects in the framework of their Local Adaptation Plan of Action (e.g. Ticllos and Recuay-Canrey Chico); coordination with the Ministry of Agriculture National Livestock Program to inventory the first 500 hectares of land to establish improved pastures in 18 communities of the Tres Cuencas Municipal Commonwealth.

IR 2.2. Local Adaptation Plans of Action (PAAL) developed and updated for the pilot Municipal Commonwealths

The Tres Cuencas and Waraq Municipal Commonwealths and the municipal province of C.F. Fitzacarrald completed their respective Local Adaptation Plans of Action, the latter in cooperation with the Ministry of Environment which validated the methodology followed to elaborate these documents. The documents were also validated with representatives of all the districts and authorities of communities. These plans identify the initiatives that the population agrees to develop in order to reduce their vulnerability to climate change.

IR. 2.3. Regional Climate Change Strategy (ERCC) of Ancash elaborated and proposed policies and actions incorporated in the Regional Concerted Development Plan (PDC)

This intermediate result was completed in the previous Fiscal Year 2016. Key elements of the Regional Climate Change Strategy (ERCC) were incorporated in the PDRC which was formally approved through a Regional Ordinance in FY2017 (Annex 7). Additionally, TMI provided technical assistance to incorporate climate change adaptation measures in the strategic institutional plan (PEI) of GORE-Ancash. The significance of these planning

instruments is that they are requirements to invest GORE staff time and financial means in climate change adaptation measures.

Municipalities, regional government, commonwealths and sectors of Ancash Region have the capacity to design and fund public investment projects to support ecosystem conservation and irrigation systems (Strategy 4)

Following the training and production of six public investment projects to promote water security in Ancash, the municipal commonwealths took charge of finding the financial resources to implement them. TMI facilitated this process that involved multiple meetings with Ancash representatives in Congress who opened opportunities to seek governmental funding: Sierra Azul Fund, the National Livestock Program in the Ministry of Agriculture, and FONIPREL. These negotiations were carried out by the local authorities trained by the project

IR. 2.4. Technical staff of Ancash Region, local governments and sectors have been trained and elaborated “green” and irrigation SNIP projects incorporating risk management and climate change context

Completed in Fiscal Year 2016. All six projects were registered in the SNIP system and were certified by MEF to receive funding from either central government agencies, regional or local governments.

IR. 2.5. Model of alliance University-Government to support continuity of “hands-on” training in development of public investment projects with a focus on risk management and climate change context

TMI coordinated with UNASAM and the Ministry of Economy Direction General of Public Investment the adoption by the university of the diploma program dedicated to the elaboration of public investment projects in the context of climate change. UNASAM had supervised the first diploma and issued the academic certificates. However, MEF indicated that the transference and new diploma would have to be postponed until de approval of the regulations for the newly established mechanism INVIERTE PERU and the National System of Multi-Annual Programming and Investment Management (SNPMGI) that replaces the former system SNIP.

IR. 2.6 SNIP “green” (grassland and wetland) and irrigation projects formulated in the Diploma have been budgeted and financed

Considering that the second objective and result of the project indicated “Public Funds for water security in high-mountain communities of Ancash obtained” the external evaluation of the project considered that this result had not been achieved. While TMI reached 77% of the USAID target indicator, the point remains, as indicated in the evaluation, that the Regional Government of Ancash has not shifted its budget implementation to increase investments in environment and agricultural projects. The funds obtained came mostly from the central government.

The Tres Cuencas Municipal Commonwealth submitted four projects to the Sierra Azul Fund. We expected that one of the 'green' projects in the Conococha wetlands would be approved before the end of FY 2017, but it did not. The Waraq Municipal Commonwealth did obtain approval of the early Warning System (SAT), but we could not obtain the certificate of investment by the end of FY2017, but it will be completed in 2017.

The following activities were conducted to promote opportunities for the six PIPs produced in the diploma and to implement other smaller actions identified in local adaptation plans of actions:

- Meetings with OPI official of provincial municipality of C.F. Fitzcarrald and Huaraz to identify funds to implement the Bofedales PIP of San Luis to adapt it to requirements of the Sierra Azul fund and the Irrigation project of Chamanayoc.
- All PIPs were registered in the SNIP's Bank of project of the Tres Cuencas Commonwealth, Recuay and Fitzcarrald Province. With the certification, they were ready for funding through different agencies. Several multiple meetings with Sierra Azul officers to adjust the six PIPs to the requirements of the fund concluded in the inclusion of four of these projects in this Fund. The other two were channeled through Huaraz and Fitzcarrald provinces. The projects are now in the General Directorate of Agrarian Infrastructure and Irrigation of MINAGRI for final evaluation.
- The project "Rehabilitation of Irrigation Water Channels in the Annexes of San Jose de Apac and Chamana" worth US \$ 517,058, was assigned to Agrorural through an agreement with the municipality of Antonio Raymondi de Bolognesi.

Women elected authorities and local leaders with increased capacities to promote climate change adaptation (Strategy 5)

IR. 2.7. Women authorities in local governments have proposed and implemented policy initiatives and projects to reduce climate change impact on women in their municipalities or commonwealths

Women grassroots associations and women serving in municipal councils (*regidoras*) cooperated through the implementation of small projects. Five women's grassroots operate in three districts of the Carlos Fermín Fitzcarrald Province and one in Huancapampa-Recuay. These groups continued with the implementation of livelihood projects co-financed by the project and municipalities. During the present Fiscal Year, the project organized a Workshop *regidoras* to strengthen their knowledge and skills to propose local policies for climate change adaptation in their municipalities. The workshop used the experience they had gained in the implementation of small projects. While *regidoras*, women authorities in local governments improved in their sense of self-efficacy and did manage to create incidence in their local governments to co-finance small projects, they still need more support to be able to conduct policy incidence by themselves and without external technical support.

IR. 2.8. The network of women councilors (Red de *Regidoras*) disseminates its experience with national support groups or national agencies

The *regidoras* trained in the elaboration of videos. They prepare three documents describing their experience working with women's grassroots on climate change

adaptation projects. These videos were presented by *Regidoras* in the Open House of the project.

R3. Improved capacities of communities to adapt to climate change, improve the health of ecosystems and develop infrastructures that regulate water and sustain livelihoods

Institutionalize in Huascarán Biosphere Reserve and Huascarán National Park 'Mechanisms for the Retribution of Ecosystem Services' (MRSE) that benefit upland communities and ecosystems that regulate water for whole basins (Strategy 6).

An outstanding achievement was the institutionalization of the MRSE Task Force supported by the project through an Ordinance issued by the GORE Ancash. The significance of this norm is that it establishes in a formal way, subject to government controllers' inspection, the obligation to implement it. The process is described through the intermediate results.

3.1. Institutionalized Mechanisms for Retribution of Ecosystems Services (MRSE) with recognized and trained advocacy group

This intermediate result was achieved with the establishment of the 'Good Governance of Mechanisms of Retribution for Ecosystem Services Platform' of the Regional Government of Ancash. The following activities were conducted to achieve this outcome and then to create conditions for its continuity:

- TMI worked closely for several months with members of the Regional Government Council to explain the need for this ordinance and its significance. The Ordinance was approved on March 3, 2017 (N ° 001-2017-GRA / CR, Annex 8), which recognizes the creation of the Platform for good governance of Mechanisms of Remuneration of Ecosystem Services (MRSE) of the Ancash Region. TMI coordinated this process with the Direction General of Evaluation, Valuation and Financing of the Natural Heritage (DGEVFPN) in MINAM.
- The approval was followed by meetings with the Office of Natural Resources of GORE Ancash to discuss implementation plans. TMI provided technical support to elaborate the regulations that govern the platform and the expansion plans beyond the two pilot basin under implementation. TMI has transferred all the studies conducted so far. The regulation has been also supervised by MINAM.
- Coordination with the Office of Natural Resources of GORE Ancash to establish the Regional Environmental Authority (ARA) of Ancash (visit to San Martín Region to collect information, and drafting of an Ordinance for Ancash). This is an executive mechanism to which the Regional Government can delegate the responsibilities it has assumed with the establishment of the MRSE Platform, SIAR and other adaptation goals established in the Regional Climate Change Strategy.

- TMI also coordinated this process closely with SUNASS, the EPS Chavin and Huascarán National Park which provided political leadership for the MRSE Task Force during the process that led to the establishment of the ordinance.
- TMI also cooperated with UNESCO Peru in the preparation of a project ("Strengthening Local Capacities for Participatory Governance of Ecosystem Hydrological Services in the Huascarán Biosphere Reserve, Peru) expected to be financed through the Spanish cooperation.

A summary of the MRSE process, studies, platform, actions and pilot sites are available in abridged form at the following ArcGIS Online® site:

<http://institutomontana.maps.arcgis.com/apps/MapSeries/index.html?appid=6a987f3e523a4457975cbbab83adbab2>

3.2. The Advocacy Group (GI) has documented scenarios that have baseline studies to support community projects for water security.

This intermediate result was completed in FY2016 and led to the selection of two priority sites. Additional studies were conducted during FY 2017 in the two watersheds to complete the baselines of the two sites. Four project interns have also contributed with hydrologic and socio-economic studies necessary to identify contributors and conservationists.

IR 3.3. Potential stakeholders of MRSE willing to develop cooperation agreements in the RBH

The EPS Chavín and SUNASS-Huaraz are the principal stakeholders in the implementation of the first MRSE in the Quillcay and Buin watersheds. The Task Force (and now the MRSE Platform) provide technical support to this effort. The following activities were implemented to promote the conservation of natural infrastructures in Quillcay (conservation of wetlands to preserve the supply of potable water in Huaraz city) and Buin (conservation of wetlands and grasslands to secure water for irrigation projects associated with CHAVIMOCHIC.

- Workshops with the EPS Chavin to identify gaps and challenges faced by this company to implement MRSE actions in the Quillcay sub-basin.
- Design of four information flyers to introduce MRSE to the population of Huaraz. The activity was conducted in coordination with EPS Chavín and other members of the MRSE group. The first two flyers were co-financed by our project, EPS Chavin and CARE.
- Distribution of the first two information flyers co-financed by EPS Chavin to 21,000 households in each one of these two occasions through the water receipts. And design and plans for the next two flyers.
- Field visits to Quillcay to design the interventions with INAIGEM.
- Discussions with INAIGEM and CARE to continue supporting implementation of the initiative after the cooperative TMI-USAID project closes.
- The workshop "Policies and Exchange of Experiences and Initiative on MRSE" facilitated the inclusion of SEDA CHIMBOTE and the coastal irrigation project

CHINECAS as additional future stakeholders that may implement MRSE interventions on the watershed.

IR 3.4. MRSE management committees formed in defined priority areas of the RBH

The process was partially initiated with the identification of the stakeholders with an interest as contributors who will support financially the establishment of conservation efforts of the natural infrastructure.

Local innovative solutions identified through participatory processes that reduce the stress on ecosystem and social and cultural attributes of community wellbeing (Strategy 7)

IR. 3.5. Diagnostic information to support development of adaptation actions (IAPS, small projects, innovative tools for decision making).

Although most of the basic diagnostic information was generated in FY 2015 and FY 2016, the UNASAM internships and other project studies provided more in-depth diagnostic information for the six public investment projects and the small projects co-financed by our project with local governments. All this information was added each year to a Geographic Handbooks prepared with the specific purpose of helping municipal commonwealths, regional and local governments, other professionals and communities involved in climate change adaptation initiatives in Ancash. The Geographic handbooks are a summary of the information collected by the project and are available in full text version and in summary visual form through Esri ArcGIS Online®.

Three Geographical Handbooks, one for each of the territory of the municipal commonwealths that participated in the project are available on line (Annex 10, 11 and 12). The same information is also in the Esri ArcGIS Story Maps® platform through TMI website and also the SIAR

The handbooks can be consulted on-line at:

- Yanamayo: <http://mountain.pe/wp-content/uploads/Territorio-seguro-y-resiliente-Mancomunidad-Municipal-YanamayoSD.pdf>
- Tres Cuencas: <http://mountain.pe/wp-content/uploads/Territorio-seguro-y-resiliente-Mancomunidad-Municipal-Tres-CuencasSD.pdf>
- Waraq: <http://mountain.pe/wp-content/uploads/Territorio-seguro-y-resiliente-Mancomunidad-Municipal-Waraq.pdf>

The Esri ArcGIS Story Maps® sites are:

- Yanamayo: <http://arcg.is/0bmK4r>
- Waraq: <http://arcg.is/1bKj4e>
- Tres Cuencas: <http://arcg.is/v5iva>

3.6. Communities have established Participatory Action Research (IAP) actions at low cost and on priority issues that contribute to adaptation to climate variability and change

- The participatory action research initiatives (IAP) initiated in FY2015 and FY2016 were consolidated in FY2017. The emphasis was placed on the creation of opportunities for the exchange of promising innovations across communities. For example, the bio-remediation system developed at a small scale in the Chonta irrigation canal in the community of Cordillera Blanca (200 users) was replicated by a section of a larger irrigation system in the Shallap Huapish Toclla Canal (over 3,000 users). All IAP initiatives continued working on different aspects of the solutions. For example, while the bioremediation technology was already in operation, farmers had to explore different ways to clean the system after it had been used for two years.
- In November 2016, the nine local research groups participated in the first "Regional Peasant Research Forum" or Yachachickunahuan Tincushun in Quechua language. This was a farmer to farmer exchange gathering with observers from UNASAM, the provincial government of Huaraz and independence, AGRORURAL and the San Nicolás Higher Technological Institute.
- As a result of this exchange, the AGRORURAL agencies in Pomabamba, San Luis and Recuay requested and were trained in IAP methodologies. AGRORURAL plans to implement the methodology with the business networks of San Miguel de Achic, Cuya, Pocrac and Churap.
- Nine IAPs developed with technical support of the project were systematized, shared and discuss with participants of this farmer forum. Additionally, TMI produced a handbook to help farmers in the use of the water quality assessment toolkit.
- Following discussions in the "Regional Peasant Research Forum" of November 2016, the participants established the Association of Peasant Researchers of Ancash (AICA). The association was registered as a formal group in SUNARP and TMI helped them design and print a brochure describing their institutional vision, mission and objectives.
- In the case of the IAP on improved pastures in the Aquia community and conducted by the Rimay Condor and Yanatuna livestock associations, the results of research were not only implemented through the small projects program (3.10) but also amplified to 18 communities in cooperation with the Ministry of Agriculture National Livestock Program.
- The community of Canrey Grande, neighbor of Cordillera Blanca community, requested support to develop a technical response to the increasing damage caused by hailstorm. Farmers identified the use of 'biol' or liquid humus as a low-cost response to their problem and experimented with the solution. Evaluation of the application of this home-made organic product to help plants recover from hailstorm and frost damage showed promising results for certain crops.

IR 3.7. Research results have been shared and communicated among community groups in the area of influence.

TMI worked with the community research groups to prepare short videos presenting the results (Annexes 14, 15, 16 y 17). The videos are available at:

Examples of community research are illustrated in the following videos:

- Community of Aquia. Research on forage crops to compensate loss of productivity in alpine grasslands: <https://youtu.be/QqfztTGvq40>
- Community of Los Andes. Research on acclimatized puna huts: <https://youtu.be/VA5WyfN6ZWA>
- Community of Cordillera Blanca. Research on bioremediation and acclimatized puna huts: https://youtu.be/yLPGFbH1P_A

IR 3.8. Communities and community-based groups have defined their development

Seven Territorial Development Plans (PDT) were produced with so many communities. The documents were prepared for electronic publication and are used by communities to promote their adaptation initiatives and seek funding (Annexes 18 to 24).

IR 3.9. Package of innovative tools to support decision-making and climate proofing in the design of community projects developed

- Final version of the methodological procedures followed to implement the IAPs were summarized in a protocol (Annex 13) that describes the steps to establish local research groups and conduct the experiments.
- The “Guide to Esri ArcGIS Story Maps® applications” to support adaptation to climate change was put together by project staff. The guide was used by UNASAM interns trained on the use of this application.

IR 3.10 Community projects focusing on reducing climate hazards and/or adaptation measures implemented in pilot sites (if small scale with project funds and if larger scale presented to national funding sources)

Three additional community projects aimed at improving water security and reducing vulnerability to climate change were added to five that were initiated in FY 2016. These projects were implemented in the framework of either local adaptation and action plans or participatory research initiatives at the community level. The emphasis during this last year was to secure co-financing of districts, provide technical assistance to communities to maintain the systems implemented and document effects of the projects whenever possible. Each one of the small project implemented had an organizational component that included de participatory elaboration of a protocol to manage collective aspects of the project (activities, roles, responsibilities, etc.).

During this reporting period TMI cooperated with the Agrarian Agency in Ancash of the Ministry of Agriculture. This agency provided technical assistance to these initiatives during and after the implementation of the projects. The assistance covers (i) diagnostics of the agricultural potential of the area; (ii) strengthening of producers’ associations; (iii) agronomic management of crops in the area.

The following activities were conducted in Fiscal Year 2017:

Wetland Conservation Area and Ecotourism Development in the Rural Community of the Andes, Shecllapata, Recuay. The work of wetland restoration was completed the previous year and the community continue its training in eco-tourism and completing or

improving elements of their project. The adaptation rationale of this project is to provide income from tourism associated with the restoration of wetlands that are part of a large archeological Inca complex located in the community. The activities this year included: constructing one climatic huts; preparing and installing information panels and other signage according to the specifications received from the national agency PROVIAS; cleaning the Shecllepata lagoon and roads; workshops to prepare community members to receive visitors and provide cultural information; compilation of informational materials on local knowledge; elaboration of a calendar of activities for the maintenance of wetlands; and finally information brochures to share with the tourists.

Improving irrigation systems with the User Committee of Santa Cruz (in cooperation with Engineers Without Borders (EWB-UTA Chapter). The diagnostic studies conducted in FY2016 with EWB identified the most cost-effective alternatives to improve the irrigation system in Santa Cruz. This case is similar to other sites (like Shirapata or Paquishca) where existing water systems were not operating at full capacity because of accumulated damages resulting from deficiencies in management. TMI staff cooperated with the Santa Cruz water user association not only in the re-building of their system of reservoir and canals, but also in the design and implementation of protocols to manage collectively the system.

The project was co-financed with EWB. The engineering components involved sediment removal from reservoirs and improvement of the Pacllash canal in small sections of under 200 meters in total resulted in improvements in the delivery of water to the users. TMI worked with EWB and the users of the canal to install and manage rain gauges, measure flows, data on each one of the irrigation parcels, transference to GIS and on the drafting of regulations to handle the 28 gates of the Santa Cruz canal. TMI involved the Direction General of Agriculture (DRA), the National Service of Agricultural Health (SENASA) and AGRORURAL in the training of the Santa Cruz water committee to improve the management of their canal.

Implementing a bioremediation system in the Campanayoc and Quinchup-Pinos sectors of the Shallap-Huapish-Toclla irrigation canal. This is a project that was possible thanks to the results obtained by another community, Cordillera Blanca and Canrey Chico, that had already experimented with bio-remediation. The construction of the bioremediation system in the canal Shallap-Huapish-Toclla replicated the experiment but at a larger scale. TMI-UNASAM students conducted fifteen trials with two replicas to evaluate the contamination of the irrigation water and the design of the small Bioremediation project, including the Environmental Impact Study. The municipality of Huaraz and the irrigation committee co-financed the implementation of this system to reduce the presence of metals caused by the recession of glaciers. Like in the experiment, the new system consisted to sedimentation pools, sowing of iron reducing bacteria, use of native species like *Juncus arcticus*, *Juncus bufonius*, *Distichia* sp, *Distichia muscoidea* and *Calamagrostis* sp that can absorb metals in water. The University of Texas contributed with water balance and future scenarios for the Shallap river to discuss best possible crops for the system in a context of climate change.

As in other small projects TMI cooperated with the water users of the sectors of Campanayoc-Macashca, Quinchup-Pinos, Querar and Craman were the pilot system was implemented to establish inter-institutional agreement to finance, build and manage the system. The agreements included the commitment of the municipality of Huaraz to finance

the construction of additional reservoirs to use the water cleaned by the bio-remediation system.

Improving the operation, maintenance and technology of the irrigation systems of Shirapata hamlet to protect bofedal restoration in Huascarán National Park. After the diagnostic study was conducted in FY2016, and in close coordination with Huascarán National Park, TMI established agreements with Shirapata to compensate their withdrawal of livestock from wetlands located inside the Park and that had been restored by TMI (with USFS funding). TMI also secure co-funding from the District Municipality of Chavín de Huantar for the project and facilitated the establishment of a formal agricultural association in Shirapata. The engineering elements of this small project involved restoring a canal that was losing water, fixing canal gates, and introducing sprinkle irrigation systems. Thus, with a small investment, co-financed by the project and the municipality, an entire irrigation system was brought back to life.

Implementing pressurized irrigation in the Paquishca sector of the Rural Community of Coyllur, Huaraz. The assessment of social feasibility conducted by the TMI team in FY2016 led to the selection of the Paquishca sector in Coyllur. The relevance of this project is that it's a demonstration site in which improved irrigation may help reduce the pressure of cattle in the bofedales or wetlands located below glaciers. During FY2017, TMI staff conducted regular follow-up visits to provide technical advice on the proper installation and use of the irrigation systems; training workshops to revise the maintenance protocol; and verification of the environmental impact mitigation plan.

Implementation of acclimatized huts in the communities of Cordillera Blanca and Los Andes. As in the case of Aquia, these two communities conducted IAP experiments to identify simple improvements to the puna huts. The participatory designs were then constructed with support of the project. The new designs included improved stoves. The improved huts are a response identified by herders to the fact that the region of pastures, the puna, is abandoned by many families because the puna has more extreme events of low temperatures. Farmers noted that there are government programs to improve the shelters of animals in response to this climate hazard and none for people. The large-scale replica of the acclimatized huts was not achieved during the life of the project. However, TMI is looking for opportunities to replicate the system through cooperation with tourism companies who bring volunteers, and also with local governments.

Improved production of forage crops in Aquia (Associations Rimay Condor y Yanatuna) and expansion to 18 communities of the Tres Cuencas Municipal Commonwealth. As noted by the farmers who conducted the IAP experiments on improved varieties of forage for high-altitude plots in Aquia, the expansion of this crop is a response to the lack of native pastures that have been impacted by climate change (see <https://youtu.be/QqfztTGvq40>). The varieties selected for best adaptation to the environment and needs of farmers were planted in production parcels of participants in the experiment. TMI also established an agreement with MINAGRI's Direction General of Livestock and the Tres Cuencas Municipal Commonwealth to expand the implementation of improved fodder crops like those tested in Aquia. TMI, with the support of former UNASAM interns, elaborated an assessment of parcels in 500 hectares in 18 communities. The information was used by MINAGRI to establish agreements with municipalities in Tres Cuencas to co-finance this operation.

Implementation of small scale adaptation projects with AGRORURAL. After AGRORURAL received training on the development of local adaptation plans of action and IAP TMI coordinated with AGRORURAL to implement priority actions identified in community adaptation plans. AGRORURAL supported reforestation in the following settlements: Conopa in the community of Jose Martin Rios Sotero Pomabamba; Collon – Urus; in Union Caninaco is the District of San Luis, C.F. Fitzcarrald province.

IR 3.11. Financial institutions have incorporated, in its portfolio of funding, projects developed with communities under an ACC focus

- TMI developed the handbook “Sources of Funding for Adaptation to Climate Change Projects in Mountain Communities of Peru” (Annex 25).
- TMI provided technical assistance to develop the public investment project proposal in the provincial municipality of Huaraz for the secondary distribution and bioremediation of the Shallap Huapish Toclla canal. An integrated proposal and project report aid was prepared with the objective of presenting the concept of the project to the Executive Director of the Regional Agency of International Technical Cooperation of the Regional Government of Ancash and to financing sources of Works for Taxes (Obras por Impuestos) with the Antamina mining company.
- A brochure was prepared to raise awareness of climate change impacts on water quality among municipal authorities of the Huaraz province and among members of the Shallap canal (Annex 26). The province of Huaraz signed agreements with TMI to expand funding for the implementation of the irrigation systems once the bio-remediation work was completed (two reservoirs of 36 m2 each and 2 kilometers of secondary canals).
- The District Municipality of Chavín de Huantar signed an agreement with TMI and the Kankar Cancha Pro Development Committee to support the implementation and maintenance of the irrigation system implemented with the project.
- The district municipality of Raquia (Tres Cuencas Municipal Commonwealth) co-financed the construction of irrigation canals and the installation of improved irrigation systems.

IR 3.12. Technological institutes (*Institutos Tecnológicos*) incorporate research methods and professional training contextualized for the implementation of small projects and IAP with an adaptation to climate change (ACC) approach

During FY2016 TMI conducted three training workshops in the frameworks of the IAP methodology: (i) Peasant Research and Business Networks; (ii) Concepts, values, principles of the Participatory Action Research (IAP) approach; and (iii) diagnosis and planning of in the case of the aguaymanto production as a new crop introduction adapted to climate change. The experiment concluded with agronomic recommendations for the introduction of this crop. A bulletin and brochure were produced by the Technological institute with technical assistance of TMI to disseminate the results of the trials. Students of the Technological Institute have proposed new research topics for their theses work.

Implementation Challenges

TMI cooperative agreement with USAID “Securing Mountain Water and Livelihoods” contributed to the agency’s SO3: the sustainable management of natural resources in glacier highlands, enhancing governance and social stability. During this last year of project implementation, TMI placed special attention to institutional arrangements that could contribute to continuity of outcomes achieved in the three areas addressed by the project, i.e. information, policies and public investment and community adaptation to climate change.

As noted in the previous annual report of FY 2016, the main challenges to the project clustered around the weak institutional appropriation of project outcomes in the Regional Government of Ancash. The region has undergone three changes of governors over a period of three years. These changes created job instability for several of our counterparts. TMI response to this context was to work closely with the members of the Regional Council, the legislative body of the Ancash Region, to promote the institutionalization of the Regional Strategy of Climate Change, SIAR and MRSE. The Office of Natural Resources and Environmental Management of GORE initiated in 2017 the establishment of the Regional Environmental Authority of Ancash (ARA), precisely to provide continuity and resources to these and other initiatives. TMI also placed a strong emphasis on cooperation with the National Research Institute on Glaciers and Mountain Ecosystems (INAIGEM) which will continue promoting some of the initiatives developed by the project such as bio-remediation and MRSE activities that have been incorporated into their work plan

TMI expects that UNASAM will continue to be an ally of the SIAR, together with other organizations that belong to the platform established to exchange and disseminate data on climate and hydrology. The Municipal Commonwealths of Tres Cuencas and Waraq, have developed a self-sufficient capacity to coordinate with the Regional Government and the several organizations that cooperated with our project.

4. PROJECT CONTEXT AND SUSTAINABILITY

The Open House of the project, in which project outcomes were shared with decision-makers in Ancash, revealed that there was expectation and demand to continue expanding or consolidating outcomes of the project, as indicated in its evaluation study (Annex 27). The leadership to continue developing the SIAR and MRSE are now not only a formal mandate of GORE Ancash, but the Head of the Natural Resources and Environment Office has made a public commitment to it and is promoting the establishment of the ARA-Ancash to do so. INAIGEM and UNASAM have also indicated commitment to continue with both sets of actions.

The generation of information through internships will need of TMI’s longer-term support and our organization is committed to continue with this successful strategy, although at this point we have not yet secured the necessary funding. The continuity of the Municipal Commonwealths depends, to some extent, on their capacity to raise public funds to demonstrate to their respective constituent local governments that investing in operation of the municipal commonwealths results in projects they could not have raised separately. Waraq has obtained a first project to develop the Early Warning System, worth over \$1.2

million dollars, and Tres Cuencas has a pipeline of projects worth over \$7.5 million. While not confirmed yet, some of these funds likely be obtained in the short term. The C.F. Fitzcarrald Province secured \$2.9 million dollars as a result of cooperation with the project. The project established multiple examples during FY2017 of how local governments and commonwealths can have significant impacts on improving the water security of rural communities through small investments to repair irrigation systems, improve irrigation technologies or support the adoption of crops (like new fodder varieties) that reduce vulnerability to climate change. AGRORURAL trained with the project in new methodologies, like IAP to promote research or Local Adaptation Plans of Action to identify communities' objectives to improve management or conservation of their natural resource base. It is highly probable that AGRORURAL will continue to include climate change adaptation tools and goals in their work plans. Finally, TMI allocated efforts and resources to develop documents that capture the information generated by the project in forms that are friendly and accessible (e.g. the Atlas in book form and Esri ArcGIS Story Maps® formats). These communication instruments support visibility and continuity of positive outcomes of the project.

5. PROJECT MANAGEMENT

TMI completed several management activities required during the last year of the project cycle, including the formal aspects of closeout, like reports on project inventory, preparation of the Final Report, preparation of all relevant documents that required final edition to be of public access (uploading documents in USAID DEC data base, TMI website and Ancash SIAR), discharge of personnel, among others.

TMI conducted a final evaluation of the project hiring a team of specialists who run the exercise between May and August 2017. The study followed the Utilization Focused Evaluation (UFE) approach. Project stakeholders, including USAID, participated in the preparation of the evaluation questions; received the draft report for comments; and participated in a one day workshop (September 1, 2017) to discuss the results and discuss continuity after the project concludes. The evaluation provided evidence, conclusions and recommendations that will help improve future project designs. The participants in the workshop that analyzed the final evaluation of the project were officers at the highest level of decision-making in their respective organizations. Organizations included: the Natural Resources and Environment Office of the Regional Government of Ancash; Glacier and Mountain Ecosystems National Research Institute (INAIGEM); two agencies of the National Water Authority (ANA), the Unit of Glaciology and Hydraulic Resources (UGRH) and the Local Water Authority (ALA); Huascaran National Park; the provincial municipality of Huaraz, the municipal commonwealths of Waraq and Tres Cuencas; and finally representatives of six communities and the Association for Community Researchers in Ancash (ACRA). This set of organizations comprises the core of endogenous institutional resources that Ancash has to consolidate a functional system that props up climate change adaptation, for the long-term, in this region. Therefore, the recommendations established by this group, while not legally binding, did provide a road map to continue using tools developed by the project and to consolidate its outcomes.

Based on the results of the project's final evaluation, the group identified several actions to support the continuity of actions and consolidation of outcomes. These actions included:

- Communicate project results and the advances achieved by Ancash on climate change adaptation to the public and to candidates in the up-coming electoral campaign to regional and local governments in 2018.
- Conduct regular policy advocacy actions at the highest level with the office of the Governor to communicate the importance of investing in climate change adaptation in Ancash.
- Participate in the elaboration of the Multi-Year Investment Plans (PIM) of the Regional Government and national sectors to identify the gaps in water security and other sectors that are particularly vulnerable to climate change and that will require investment in the 2018-2021 PIM.
- TMI cooperation with UNASAM to continue expanding the research and internship program developed by the project in Ancash. Continue cooperation with MEF once the Ministry has a new training program in place for the National System of Multi-Annual Programming and Investment Management System that replaced SNIP.
- Active participation of organizations involved in the project in the Climate Change Task Force lead by GORE Ancash.

Monitoring and Evaluation

The results of the Final Evaluation of the project was conducted by a team lead by Mr. Augusto Cavassa (Annex 29). The evaluation presented, in summary, the following findings:

- The role played by TMI as an entity that facilitates processes and has the capacity to generate synergy among the different stakeholders is a valuable role that should be sustain to promote Climate Change adaptation in highland Ancash.
- The implementation of the Regional Strategy of Climate Change requires the active participation of regional agencies like AGRORURAL, SENASA, SERFOR, ALA. These agencies should cooperation with local governments and rural communities. The role of municipal commonwealths as facilitators of this role should be encouraged.
- Cooperation among different sectors and between different government levels from central to local government is essential to promote effective adaptation measures. TMI conducted the activities of the project promoting this kind of policy integration.
- TMI should prepare a summary presentation of the strategy and its approach to securing water in mountain socio-ecosystems, demonstrating outcomes, impacts and remaining challenges in abridge form. The immediate target of communication are the candidates to regional and local government election in the 2018 campaign. Include the identification of the regional contributions to the Nationally Determined Contributions of Peru.
- The evaluation of effects and impact of interventions should be planned earlier in the project's cycle to understand results and identify contributing factors and sustainability issues as early as possible.
- TMI has developed and promoted innovative instruments for territorial-based development. However, instruments and skills need to be integrated on local governments and municipal commonwealths (public investment that reduces

vulnerability in agriculture; risk management policies; promotion of tourism; improvements in productive technology and land use planning). The role of local governments in land planning and cooperation with peasant communities is an area that requires further development in Ancash.

- The project implemented small-scale projects that linked livelihoods and adaptation to climate change. Promote the establishment of a fund or identify national funds like PROCOMPITE to support small-scale projects linked to livelihoods, market value chains and adaptation. Disseminate the handbook “Sources of Funding for Adaptation to Climate Change Projects in Mountain Communities of Peru and concentrate on small funds available in local governments (explore the use of the norm Ley 29030 which authorizes the implementation of small projects directly by the beneficiaries up to \$123,000 dollars and in the future operate projects embedding TMI project personnel in local governments of municipal commonwealths.
- The bioremediation project is a significant technology which could be expanded through alliance with INAIGEM and UNASAM.
- The IAP research approach shows evidence of local empowerment and participation. However, there is no evidence of institutional sustainability once external support of the project ends. Therefore, TMI could, in future projects, promote mechanisms like research competitions among communities with prizes sponsored by local governments. The learning gained through participatory research could be exchanged in district level events with the participation of staff or councilors (*regidores/as*).

Tracking Products and Detailed Implementation Plan

The monitoring and evaluation area implemented the following activities during FY 2017”

Document Supports	Name	Action
Project management	1 Annual Work Plan Oct 2016 – September 30, 2017	Excel spreadsheet for the product matrix, including outcomes, indicators, activities and sub-activities. The Annual Work Plan sub-activities are revised each quarter and adjusted when needed
Project management	USAID Indicators Tracking Table	Quarterly measurement of USAID indicators using Excel spreadsheets by component and the indications of the PMP
Project management	Inputs for 3 Quarterly Report and Annual Report	Progress Report: October – December 2016, January – March 2017, April – June 2017; July-September 2017
Project management	4 Quarterly monitoring reports	Monitoring analytical reports based on monthly reports
Project management	Inputs for the Annual Report October 1, 2016 to September 30, 2017	Final monitoring report Oct 1, 2016 – Sept 30, 2017
Project management	Final Evaluation of the project	Participatory design of the evaluation with key decision-makers. Workshop to return results to

Document Supports	Name	Action
		stakeholders and debate implications and agreements.
Project management	Annual Report, October 1, 2016 to September 30, 2017	Annual Report Elaborated
Project management	Final Report of the project April 2014 – September 2017	Inputs and tracking table project advance and USAID indicators and other inputs for the Final Report.
Project management	Project Database	Verification means and quality reports. Upload of the Dropbox Database

6. FINANCIAL REPORT

PROJECT:
SECURING MOUNTAIN WATER & LIVELIHOODS
PERIOD: APRIL 2014 - SEPTEMBER 2017

Financial Execution							
Item	Description	Annual Oct 2016-Sep 2017			Project April 2014 - September 2017		
		Planned	Executed	%	Planned	Executed	%
R1	Improved knowledge and management of territories, ecosystems and hydrologic infrastructures reduces risks and impacts of climate change in highland Ancash Region	201,562	201,948	100%	538,837	539,224	100%
R2	Public Funds for water security in high-mountain communities of Ancash obtained	54,958	54,380	99%	225,103	224,526	100%
R3	Improved capacities of communities to adapt to climate change, improve the health of ecosystems and develop infrastructures that regulate water and sustain livelihoods	130,085	129,553	100%	463,957	463,426	100%
M&E	Monitoring and Evaluation	75,601	75,961	100%	199,436	199,796	100%
T -G&A	Technical Assistance, Management and Administration of the Project	513,589	513,951	100%	1,484,866	1,485,227	100%
	TOTALES	975,794	975,794	100%	2,912,199	2,912,199	100%

COST SHARE TRACKING SUMMARY

PROJECT NAME: SECURING MOUNTAIN WATERS AND LIVELIHOODS

REPORTING PERIOD: September, 2017

PROJECT INFORMATION

Project Start Date: April 08, 2014

Project End Date: September 30, 2017

LINE ITEMS	ACTUAL TO 2017	SEPTEMBER	PROJECTIONS			COMMENTS
	Actual Cost-Share TMI	Actual Cost-Share Collaborative	Projection Cost-Share TMI	Projection Cost-Share Collaborative	TOTAL	
FUNDING SOURCE						
McKnight Foundation - Py Punas- Agua	55,395.59				55,395.59	Climate change adaptation in alpine grasslands
IUCN/Finish Government - Paramo	532,838.57				532,838.57	Paramo conservation, management and climate change adaptation
IUCN/BMU-German Government	480,395.25				480,395.25	Ecosystem Based Adaptation Project in Nor Yauyos
McKnight Foundation 2016	99,126.09				99,126.09	Climate change adaptation in alpine grasslands
UNESCO Peru	31,421.97				31,421.97	Climate change adaptation
IICA - MFS	41,254.16				41,254.16	Climate change adaptation
MAPs	8,954.68				8,954.68	Climate change adaptation
Unrestricted	19,174.78				19,174.78	Climate change adaptation
Paramo UICN-lvH (536)	44,605.16				44,605.16	Paramo conservation, management and climate change adaptation
FIIAPP (537)	16,749.48				16,749.48	Climate change adaptation
GIZ - EBA (538)	10,691.14				10,691.14	Climate change adaptation
PNIA-INIA	107,318.48	61,080.98			168,399.46	Ethnobotany and Biological prospecting of Paramo y Cloud Forest Ecosystems to promote innovation in bio-commerce (Piura)
PNIA-INIA-ACOBOSPA		8,545.00			8,545.00	Production and Use of Potato 'True Seed' (SSP) for the sustainable production of potato to reduce vulnerability to climate change in the Paramo of Piura
BID -MINAM		125,166.00			125,166.00	FONAM MINAM-BID: studies to support SNIP projects to store wetlands
SEPIA		5,580.00			5,580.00	Conference: Ancestral Water Management Technologies: Contributions to enhance water security. SEPIA XVI.
Erik Cammeraat, PhD, University of Amsterdam		42,000.00			42,000.00	Geo-ecology of Ulta and Buin watersheds, Ancash. Study of land use, water and climate change nexus
TMI Volunteers	60,973.00				60,973.00	Volunteers cooperating in Peru climate change projects

COST SHARE TRACKING SUMMARY**PROJECT NAME:** SECURING MOUNTAIN WATERS AND LIVELIHOODS**REPORTING PERIOD:** September, 2017**PROJECT INFORMATION****Project Start Date:** April 08, 2014**Project End Date:** September 30, 2017

LINE ITEMS	ACTUAL TO SEPTEMBER 2017		PROJECTIONS		TOTAL	COMMENTS
	Actual Cost-Share TMI	Actual Cost-Share Collaborative	Projection Cost-Share TMI	Projection Cost-Share Collaborative		
FUNDING SOURCE						
TMI in Kind Support	20,801.07				20,801.07	4x4 truck and others
UT (SUBRECIPIENT)		146,212.11			146,212.11	In kind support from University of Texas programs in watershed management
Mancomunidad Municipal Tres Cuencas		205,586.21			205,586.21	Pre-investment studies funded by FONIPREL to develop irrigation projects, capacity building and ecosystem service public investment projects
Municipalidad Provincial de Chavin		5,641.88			5,641.88	Irrigation System Improvement in the Shirapata locality
Aporte de comunidades y otras entidades		436.36			436.36	Community contributions in labor and other items
Centro de Investigación Ambiental para el Desarrollo de la Universidad Nacional Santiago Antunez de Mayolo		23,333.33			23,333.33	Collaboration agreement with CIAD UNASAM
EWB		8,960.00			8,960.00	Materials for the irrigation improvement project in the canal Wilcacocha - Paquish of Santa Cruz
BMU-German Government. IKI		0.00			0.00	Ecosystem Based Adaptation Project in Nor Yauyos
UNESCO Perú, Science Office (In kind)		146,297.00			146,297.00	Adaptation actions in Huascarán Biosphere Research
Municipalidad Distrital Antonio Raymondi - Raquia		531,556.00			531,556.00	Irrigation project in San Jose de Apac y Chamana, co-executed AGRORURAL
AGRORUAL (In kind)		1,914.71			1,914.71	Development and Adaptation to Climate Change Action Plans
INAIGEM (In kind)		164,062.53			164,062.53	International Conference on Glaciers and Mountain Ecosystems
Sub total	1,529,699.42	1,476,372.11	0.00	0.00	3,006,071.53	

Products and Means of Verification (Quarter July – September 2016)

Annex	Products and other means of verification
1	Ordenanza Regional de creación del SIAR
2	Convenio con el Gobierno Regional
3	Planes de Gestión de Laboratorios
4	Resumen de pasantías
5	Manual de aplicación meteorológica
6	Declaración de Impacto Ambiental SAT Palcacocha
7	Plan de Desarrollo Regional Concertado
8	Ordenanza Regional del Reconocimiento a la Plataforma de MRSE
9	Infografía de Sensibilización en MRSE
10	Manual Geográfico de la Mancomunidad Tres Cuencas
11	Manual Geográfico de la Mancomunidad Waraq
12	Manual Geográfico de la provincia de Carlos Fermin Fitzcarrald
13	Memoria de Taller “Elaboración del guion metodológico para aplicar la IAP en las comunidades Rurales”
14	Video Participativo en IAP de la Comunidad Campesina de Cordillera Blanca
15	Video Participativo en IAP de la Comunidad Campesina de Aquia
16	Video Participativo en IAP de la Comunidad Campesina de Los Andes
17	Video Participativo en IAP de la Comunidad Campesina de Canrey
18	Plan de Desarrollo Territorial de la Comunidad Campesina de Cordillera Blanca
19	Plan de Desarrollo Territorial de la Comunidad Campesina Los Andes
20	Plan de Desarrollo Territorial de la Comunidad Campesina de Canrey
21	Plan de Desarrollo Territorial de la Comunidad Campesina de Conopa
22	Plan de Desarrollo Territorial de la Comunidad Campesina de Caninaco
23	Plan de Desarrollo Territorial del Centro Poblado de Collon
24	Plan de Desarrollo Territorial de Santa Cruz
25	Guía de Financiamiento en Adaptación al Cambio Climático para Comunidades Campesinas
26	Folleto de sensibilización sobre cambio climático y calidad del agua del río Shallap
27	Informe de taller participativo para la generación de preguntas de evaluación
28	Informe de presentación de evaluación a actores locales
29	Resumen Ejecutivo de la Evaluación del proyecto y Documento Completo de Evaluación

7. ANNEXES

Annex A. Tracking Table of Project Products

RI. Improved knowledge and management of territories, ecosystems and hydrologic infrastructures reduces risks and impacts of climate change in highland Ancash Region

Code	Description	Yr 2016-2017				Q11		Q12		Q13		Q14		Summary			
		Unit of measure	Physical Target of project programm ed	Physical target Achieved	Physical Target Programm ed 2016 - 2017	Oct - Dec		Jan - March		April - June		July - Sept		April 14 - Sept 17			
						P	E	P	Exe	Prog	Exe	Prog.	Exe	Prog.	Exe	Dif.	
R1	Improved knowledge and management of territories, ecosystems and hydrologic infrastructures reduces risks and impacts of climate change in highland Ancash Region																
IR 1.1. 1.	The Regional Environmental Information System (SIAR) is operating and receives information from members of the “climate Information Platform”, UNASAM and other sources.																
A.1.1.1.	Establishment and operation of the advocacy group of the "climate information platform"	Agreement documents	1	1										1	1	0	
S.A. 1.1.1.1	Explore information supply and demand groups	Report	1	1										1	1	0	
S.A. 1.1.1.2	Map stakeholders	Report	1	1										1	1	0	
S.A. 1.1.1.3	Establish advocacy group	Work Plan	1	1										1	1	0	
A.1.1.2	Implementation of a regional environmental information system (SIAR) ...	Manageme nt Tools	2	2		0	0	1	0	1	0	0	0	2	2	0	
S.A. 1.1.2.1	Communication with GORE Ancash to implement SIAR and staff	Documents	1	1		0	0	1	0	0	0	0	0	1	1	0	
S.A. 1.1.2.2	Develop climate indexes highland Ancash	Reports	1	1		0	0	0	0	0	0	0	0	1	1	0	
S.A. 1.1.2.3	Develop watershed analysis (Study case Shallap)	Documents	1	0.4	0.6	0	0	0.6	0	0	0	0	0.6	1	1	0	
S.A. 1.1.2.4	GLOF map of risks in CB (input for SNIP risk analysis)	Documents	1	0.4	0.6	0	0	0.6	0.2	0	0.4	0	0	1	1	0	
S.A. 1.1.2.5	Case study: hydrology mapping (input for SNIP risk analysis): with interns	Documents	6	6	0	0	0	0	0	0	0	0	0	6	6	0	
S.A. 1.1.2.6	Document with recommendations on practical use of UNASAM internships	Documents	1	0	1	0	0	1	0.5	0	0.5	0	0	1	1	0	
A. 1.1.3.	Improve management instruments of the environmental research center for development (CIAD)...	Perceived improve- ment	4	2	2			1	1	1	0	0	0	4	3	1	
S.A. 1.1.3.1	Share instruments developed by UTA & project with the platform	Presentation s	4	2	2	0	1	0	1	2	0	0	0	4	4	0	
S.A. 1.1.3.2	Cooperation with SENAMHI (data for SIAR)	Visits	4	2	2	0	0	1	1	1	0	0	0	4	3	1	
A. 1.1.4	Implementation of climate information for SIAR through project and various contributing suppliers of information	Agreement s	2	0	2	0	0	0	0	1	0	1	1	2	1	1	
S.A. 1.1.4.1	Logistic support to platform	Reports	5	3	2	0	0	1	1	1	1	0	0	5	5	0	
S.A. 1.1.4.2	Platform meetings to cooperate with SIAR	Reports	2	1	1	0	0	1	1	0	0	0	0	2	2	0	
S.A. 1.1.4.3	Sign agreements to support SIAR	MDE	3	2	1	0	1	1	0	2	0	0	0	3	3	0	
IR. I. 2.	. Center of Environmental Research for Development (CIAD) is a source of hydro-climatic information for SIAR																
A. 1.2.1.	Improve cooperation of the Center of Environmental Research for Development (CIAD) with SIAR, INIGEM or other information providers in Ancash	Work Plan	1		1	0	0	1	1	0	0	0	0	1	1	0	

Code	Description	Yr 2016-2017				Q11		Q12		Q13		Q14		Summary		
		Unit of measure	Physical Target of project programmed	Physical target Achieved	Physical Target Programmed 2016 - 2017	Oct - Dec		Jan - March		April - June		July - Sept		April 14 - Sept 17		
						P	E	P	Exe	Prog	Exe	Prog.	Exe	Prog.	Exe	Dif.
S.A. 1.2.1.1	Sign agreement with UNASAM (CIAD y LCA e INAIGEM)	Agreements	4	2	2	2	2	0	0	0	0	0	0	4	4	0
S.A. 1.2.1.2	Develop SOW to develop business plans	SOW	1	1		0	0	0	0	0	0	0	0	1	1	0
S.A. 1.2.1.3	Business Plans for LCA y CIAD (cooperation with INAIGEM)	Plans	1	0.5	0.5	0.5	0.5	0	0	0	0	0	0	1	1	0
A. 1.2.2.	Implement management plans of CIAD laboratories through innovative and sustainable approaches	% plan implemented			40	0	0	20	0	20	0	0	0	0	0	0
S.A. 1.2.2.2	Supervise implementation of plan and support it	Reports	8	4	4	3	0	1	0	0	1	0	0	8	5	3
S.A. 1.2.2.4	Seek funding sources to support info flow to SIAR (private sector or public)	Funding sources	8	4	4	3	0	1	1	0	3	0	0	8	8	0
A. 1.2.3.	Generation of certified hydro-climatic information and services according to the demands of users of SIAR	New contracts			5	0	0	3	0	2	0	0	0	0	0	0
S.A. 1.2.3.4	Communication actions: support CIAD	Actions	2	1	1	0	1	1	0.5	0	0.5	0	0	2	2	0
IR. 1. 3.	. Institutions and communities have access to environmental and hydro-climatic information through SIAR															
A. 1.3.1.	Support development of cooperation agreements between MINAM and GORE Ancash to establish SIAR	SIAR operational	1		1			1	1	0	0	0	0	1	1	0
S.A. 1.3.1.1	Meetings to set up system	Reports	2	2	0			0	0	0	0	0	0	2	2	0
S.A. 1.3.1.2	Work Plan SIAR GORE Ancash	Actions in work plan	10	5	5	0	4	5	0	0	0	0	1	10	10	0
S.A. 1.3.1.3	Coordinate training with MINAM for SIAR GORE Ancash teams	Training workshops	3	1	2	2	1	0	0	0	0	0	0	3	2	1
A. 1.3.2.	Provide relevant information to potential stakeholders on adaptation to climate change and dissemination of the available information at SIAR and in partnership with UNASAM/INAIGEM	users in web - year			1000			0	0	600	0	400	0	0	0	0
S.A. 1.3.2.1	Facilitate and support agreements to provide information to SIAR by platform	Agreements	1		1	1	0	0	1	0	0	0	0	1	1	0
S.A. 1.3.2.3	Prepare brochure climate data in SIAR	Brochure	1		1	0	0	1	0	0	1	0	0	1	1	0
S.A. 1.3.2.4	Social communication directed to users	Publications	8	2	6	2	1	4	0	0	5	0	0	8	8	0
IR.1.4	Training program on climate change adaptation implemented has strengthened the capacities of students and faculty at UNASAM to support adaptation actions in Ancash															
A. 1.4.1.	Design training program in adaptation to climate change for faculty and students to meet the needs of research and information services	Training modules	6	6				0	0	0	0	0	0	6	6	0
S.A. 1.4.1.1	Design training plan	Documents	1	1		0	0	0	0	0	0	0	0	1	1	0

Code	Description	Yr 2016-2017				Q11		Q12		Q13		Q14		Summary		
		Unit of measure	Physical Target of project programmed	Physical target Achieved	Physical Target Programmed 2016 - 2017	Oct - Dec		Jan - March		April - June		July - Sept		April 14 - Sept 17		
						P	E	P	Exe	Prog	Exe	Prog.	Exe	Prog.	Exe	Dif.
S.A. 1.4.1.2	Design module Variability	Documents	1	1		0	0	0	0	0	0	0	0	1	1	0
S.A. 1.4.1.3	Design module methods and protocols on science research	Documents	1	1		0	0	0	0	0	0	0	0	1	1	0
S.A. 1.4.1.4	Design module 'Planning CC Adaptation'	Documents	1	1		0	0	0	0	0	0	0	0	1	1	0
S.A. 1.4.1.5	Design module: Commonwealths and public administration	Documents	1	1		0	0	0	0	0	0	0	0	1	1	0
S.A. 1.4.1.6	Design module 'Instruments for facilitation in communities	Documents	1	1		0	0	0	0	0	0	0	0	1	1	0
S.A. 1.4.1.7	Design Module "MRSE"	Documents	1	1		0	0	0	0	0	0	0	0	1	1	0
A. 1.4.2.	Development of training courses in Climate Change Adaptation (CCA) according to the needs identified	% capacity increased	4	3	1	1	0	0	1	0	0	0	0	4	4	0
S.A. 1.4.2.1	Organize courses in CC adaptation with modules and experience of the project	Courses	4	3	1	0	0	1	1	0	0	0	0	4	4	0
S.A. 1.4.2.2	Develop course for internship candidates	Courses	4	3	1	1	1	0	0	0	0	0	0	4	4	0
S.A. 1.4.2.3	Document experience impact of training	Documents	4	3	1	0	1	1	0	0	0	0	0	4	4	0
A. 1.4.3.	Elaboration of material and virtual learning space to reinforce training courses	materials in platform	1		1			1	1	0	0	0	0	1	1	0
S.A. 1.4.3.1	Design virtual platform	Module	1	1	0	1	1	0	0	0	0	0	0	1	1	0
S.A. 1.4.3.2	Adjust modules to e-platform	Modules in platform	7	2	5	2	0	3	1	0	1	0	3	7	7	0
S.A. 1.4.3.3	Implement and improve platform	Reports	4	4	0	0	0	0	0	0	0	0	0	4	4	0
S.A. 1.4.3.4	Build a package presenting training	Package	1	1		0	0	0	0	0	0	0	0	1	1	0
S.A. 1.4.3.5	Seek funding to continue internship	Sources of funding	3		3	2	0	1	0	0	0	0	0	3	0	3
IR 1.5	Participants of the Training Internship in climate change adaptation are qualified to generate necessary, high-quality information															
A. 1.5.1.	Develop the program of training internships ("pasantías") for senior students in UNASAM	Internships management tools operating	3	2	1	1	0	0	1	0	0	0	0	3	3	0
S.A. 1.5.1.1	Develop protocols for internship	Protocol	1	1		0	0	0	0	0	0	0	0	1	1	0
S.A. 1.5.1.2	Improve protocols and capture lessons	Reports	2	2		0	0	0	0	0	0	0	0	2	2	0
S.A. 1.5.1.3	Select group of interns each year (each 6 - 7 months)	Students trained	22	13	9	9	9	0	0	0	0	0	0	22	22	0
S.A. 1.5.1.4	Induction of interns	Workshop	6	3	3	2	1	1	1	0	1	0	0	6	6	0
S.A. 1.5.1.5	Define themes	Themes selected	22	13	9	9	9	0	0	0	0	0	0	22	22	0
S.A. 1.5.1.6	Work plans for each intern	Work Plan	22	13	9	9	9	0	0	0	0	0	0	22	22	0
S.A. 1.5.1.7	Field work data reports	Report	131	83	48	30	30	18	18	0	0	0	0	131	131	0
S.A. 1.5.1.8	Prepare final report	Documents	21	13	8	0	0	9	0	0	0	0	7	21	20	1
S.A. 1.5.1.9	Presentations and dissemination of results	Events	21	13	8	0	0	9	0	0	0	0	0	21	13	8
A. 1.5.2.	Training internship is institutionalized at the UNASAM level and with other interested partners	Internship program recognized	1	0	1			1	0	0	0	0	0	1	1	0

Code	Description	Yr 2016-2017				Q11		Q12		Q13		Q14		Summary		
		Unit of measure	Physical Target of project programmed	Physical target Achieved	Physical Target Programmed 2016 - 2017	Oct - Dec		Jan - March		April - June		July - Sept		April 14 - Sept 17		
						P	E	P	Exe	Prog	Exe	Prog.	Exe	Prog.	Exe	Dif.
S.A. 1.5.2.2	Communicate results	Publications	12	6	6	0	1	6	1	0	0	0	0	12	12	0
S.A. 1.5.2.3	Meetings with private, public sectors: present results	Reports	4	1	3	0	1	3	0	0	0	0	2	4	4	0
S.A. 1.5.2.4	Seek organizations that could fund the continuity of action	Organizations	3		3	0	1	3	2	0	0	0	0	3	3	0
IR 1.6	Cooperative Research Group in Adaptation (GCI) in High-Mountain Ecosystems implements climate change adaptation projects in Ancash Region															
A. 1.6.1.	Implementation of the Cooperative Research Group in Adaptation and preparation of the regional environmental research agenda	GCI working with a plan	2	1	1	1	0	0	1	0	0	0	0	2	2	0
S.A. 1.6.1.1	Explore cooperation between Lima based academic institutions and UNALM to promote research in HBR	Reports	3	3	0	0	0	0	0	0	0	0	0	3	3	0
S.A. 1.6.1.2	Agreements to cooperate as network	Agreements	2	2	0	0	0	0	0	0	0	0	0	2	2	0
S.A. 1.6.1.3	Agenda for Cooperation	Work Plan	1	1	0	0	0	0	0	0	0	0	0	1	1	0
S.A. 1.6.1.4	Involve other potential support partners/organizations (MINAM-DGIIA, CONCYTEC, UNESCO)	Reports	3	1.5	1.5	0	0	2	1	0	0.5	0	0	3	3	0
A. 1.6.2.	Organize meetings between the sub-groups of the Cooperative Research Group on Adaptation to High Mountain Ecosystems to develop research projects	Research projects	7	1	6	3	0	3	0	0	0	0	0	7	1	6
S.A. 1.6.2.1	Discuss proposals with partners	Reports	12	6	6	6	3	0	2	0	0	0	1	12	12	0
S.A. 1.6.2.2	Develop and submit proposals for research with partners (e.g. McKnight, Belmont Forum, USFS, NSF, PNIA, CONCYTEC, others)	Funding sources: applications	7	6	1	1	0	0	0	0	1	0	0	7	7	0
S.A. 1.6.2.3	Implement research when approved	Research projects	4	1	3	0	0	3	0	0	0	0	0	4	2	2
S.A. 1.6.1.6	Modeling GLOF events Course with INAIGEM		1		1	1	0	0	0	0	0	0	1	1	1	0
RI 1.7	UNASAM recognized as provider of information and technical assistance for climate change adaptation in Ancash															
A. 1.7.1.	Training of interns and other actors in ArcGIS on-line	persons trained ArcGis Online	20	8	12	12	0	0	0	0	0	0	0	20	12	0
S.A. 1.7.1.1	Acquire ArcGIS on-line	License	10	10	0	0	0	0	0	0	0	0	0	10	10	0
S.A. 1.7.1.2	SOW ArcGIS online specialist to provide training	SOW	1	1	0	0	0	0	0	0	0	0	0	1	1	0
S.A. 1.7.1.3	Train interns	Curses	3	2	1	1	0	0	0	0	0	0	1	3	3	0
A. 1.7.2.	Disseminate reports of internships/research to local governments, municipal commonwealths, SIAR and others	Research available	20	8	12			4	0	8	0	0	0	20	12	0
S.A. 1.7.2.1	Summary of each internship results	Documents	3	0	3	2	0	1	0	0	0	0	3	3	3	0

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S.A. 1.7.2.3	Communicate results to organizations in Ancash	Organization s	200	0	200	0	0	200	0	0	50	0	0	200	50	150
S.A. 1.7.2.4	Prepare E-brochures of internships	Brochure	3	1	2	0	0	2	1	0	1	0	0	3	3	0
A. 1.7.3.	Strengthen UNASAM - OEUYPS program of volunteers as well as other sources through cooperation with the climate platform and other project components	Volunteer	40	30	10	0	1	5	1	5	0	0	0	40	32	8
S.A. 1.7.3.1	Coordination with OEUYPS	Reports	2	1	1	0	0	1	1	0	0	0	0	2	2	0
S.A. 1.7.3.2	Coordination with stakeholders for volunteers	Requests of volunteers	20	20	0	0	0	0	0	0	0	0	0	20	20	0
S.A. 1.7.3.3	Implement volunteer work with UNASAM	Volunteers	20	10	10	5	1	5	1	0	8	0	0	20	20	0
I.R. 1.8	Develop a system for collecting and reporting water quality information to rural communities through students using smartphone applications															
A. 1.8.1.	Design, develop and validate a telephone app for collecting and reporting water quality information through university students	Apps validated	2	1	1			1	0	0	1	0	0	2	2	0
S.A. 1.8.1.1	Coordination with specialists to design APP	Reports	3	2	1	1	1	0	0	0	0	0	0	3	3	0
S.A. 1.8.1.2	Select specialist	Specialist identified	2	1	1	1	0	0	1	0	0	0	0	2	2	0
S.A. 1.8.1.3	Develop APP	App developed	2	1	1	0	0	1	0	0	0	0	1	2	2	0
S.A. 1.8.1.4	Test	Tests	4	3	1	0	0	1	1	0	0	0	0	4	4	0
S.A. 1.8.1.5	Document App	Reports	2	0	2	0	0	1	0	1	2	0	0	2	2	0
A. 1.8.2.	Institutionalize the strategy to develop Apps to support climate change adaptation with UNASAM and other partners	Agree--ments	2		2	1	0	1	0	0	0	0	0	2	0	2
S.A. 1.8.2.1	Present results of App	Presentation s	2	1	1	0	1	1	1	0	0	0	0	2	3	-1
S.A. 1.8.2.2	Seek UNASAM Faculty interested to replicate	Agreements	2	0.5	1.5	0.5	0	1	0	0	1.5	0	0	2	2	0
S.A. 1.8.2.3	Work Plan to replicate	Work Plan	1		1	0	1	1	0	0	0	0	0	1	1	0

R2. Develop a program in public investment to support local adaptation plans of action

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R2	Develop a program in public investment to support local adaptation plans of action															
I.R.2.1.	Municipal Commonwealth Support Group constituted															
A. 2.1.1.	Establish a support Group with pilot Municipal Commonwealths...	Advocacy Group	1	1	0									1	1	0
S.A. 2.1.1.1	Form GI with 3 MMs	Agreement	1	1	0	0	0	0	0	0	0	0	0	1	1	0
S.A. 2.1.1.2	Provide assistance to GI: MM's development plans	Support meetings	10	6	4	2	2	2	0	0	2	0	0	10	10	0
S.A. 2.1.1.3	Action Plan with each MM	Action Plans	3	3	0	0	0	0	0	0	0	0	0	3	3	0
S.A. 2.1.1.4	Implement Action Plans	Activities implemented	180	80	100	30	30	30	25	30	30	10	11	180	176	4
S.A. 2.1.1.5	Monitor Action Plans	Reports	8	4	4	1	1	1	0	1	1	1	2	8	8	0
IR 2.2.	Local Adaptation Plans of Action (PAAL) developed and updated for the pilot Municipal Commonwealths															
A. 2.2.1.	Training of Municipal Commonwealths and municipal staff in(...(PAAL)).	PAAL (local adaptation plans)	3	0	3			3	0	0	3	0	0	3	3	0
S.A. 2.2.2.1	Coordinate training	Curse designed	2	2	0	0	0	0	0	0	0	0	0	2	2	0
S.A. 2.2.2.2	Capacity development meetings	Meetings	3	3	0	0	0	0	0	0	0	0	0	3	3	0
S.A. 2.2.2.3	Provide technical assistance to PAAL (1 new + 2 updates)	Assistance Actions	3	3	0	0	0	0	0	0	0	0	0	3	3	0
S.A. 2.2.2.4	Document PAAL with partners and specialists	Document	3	0	3	0	1	3	2	0	0	0	0	3	3	0
S.A. 2.2.2.5	Revise and approve PAAL (MM Board of Directors)	PAAL approved	3	0	3	0	0	3	3	0	0	0	0	3	3	0
S.A. 2.2.2.6	Support incorporation of PAAL into PDCs	Agreement	3	0	3	0	0	1	0	2	2	0	0	3	2	1
IR 2.3.	Regional Climate Change Strategy (ERCC) of Ancash elaborated and proposed policies and actions incorporated in the Regional Concerted Development Plan (PDC)															
A. 2.3.1.	Ancash Government develops its Regional Climate Change Strategy (ERCC) with support of MINAM	ERCC developed	1	1				0	0	0	0	0	0	1	1	0
S.A. 2.3.1.1	Facilitate process of support to ERCC in Council of GOR Ancash	Agreement	4	4		0	0	0	0	0	0	0	0	4	4	0
S.A. 2.3.1.2	Agreements with MINAM to support ERCC. SOW consultant	Agreement	1	1		0	0	0	0	0	0	0	0	1	1	0
S.A. 2.3.1.3	Revise reports of consultant	Reports	4	4		0	0	0	0	0	0	0	0	4	4	0
S.A. 2.3.1.4	Support Stakeholder involvement in ERCC	Participants	150	150		0	0	0	0	0	0	0	0	150	150	0
S.A. 2.3.1.5	MMs participation in ERCC	MM Reunions ERCC	3	3		0	0	0	0	0	0	0	0	3	3	0
S.A. 2.3.1.6	Align PAAL - ERCC	PAAL	3	0	3	0	0	0	0	3	3	0	0	3	3	0
S.A. 2.3.1.7	Coordinate with GOR Ancash insertion of ERCC in PDCR	Agreement	1	1		0	0	1	1	0	0	0	0	2	2	0

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S.A. 2.3.1.9	Provide assistance to include ERCC in PDCR	Support Actions	4	1	3	0	0	1	2	2	0	0	0	4	3	1
IR. 2.4.	Technical staff of Ancash Region, local governments and sectors have been trained and elaborated 'green' and irrigation SNIP projects incorporating risk management and climate change context.															
A. 2.4.1.	Organization of the Diploma in "green" and irrigation SNIP projects for the training of public functionaries of Ancash	Diploma level course	1	1		0	0	0	0	0	0	0	0	1	1	0
S.A. 2.4.1.1	Design course with MEF	modules	5	5		0	0	0	0	0	0	0	0	5	5	0
S.A. 2.4.1.2	Coordinate with municipalities: letters support	Letters	25	25	0	0	0	0	0	0	0	0	0	25	25	0
S.A. 2.4.1.3	Support logistics of each modules	Modules	5	5		0	0	0	0	0	0	0	0	5	5	0
A. 2.4.2.	Implementation of the Diploma course to elaborate SNIP projects at profile level incorporating risk management in a climate change context	Public personnel trained	25	25	0	0	0	0	0	0	0	0	0	25	25	0
S.A. 2.4.2.1	Organize PIP teams	Teams	7	7	0	0	0	0	0	0	0	0	0	7	7	0
S.A. 2.4.2.2	Primary & Secondary Information for PIPs	Projects	7	7	0	0	0	0	0	0	0	0	0	7	7	0
S.A. 2.4.2.3	Incorporate risk management in PIPs	Projects	7	7	0	0	0	0	0	0	0	0	0	7	7	0
S.A. 2.4.2.4	Participants develop draft PIP profiles	Profiles	7	7		0	0	0	0	0	0	0	0	7	7	0
S.A. 2.4.2.5	Final edition of PIP: delivery to SNIP	Final Document PIP	6	6		0	0	0	0	0	0	0	0	6	6	0
A. 2.4.3.	Develop support tools for analysis of risk management and climate change context for the elaboration of "green" and irrigation SNIP projects	Support tools	5	4	1	0	0	1	0	0	0	0	0	5	4	1
S.A. 2.4.3.1	Local knowledge to assess wetlands (method)	Studies available	1	1	0	0	0	0	0	0	0	0	0	1	1	0
S.A. 2.4.3.2	Perceptions of climate change (method)	Studies available	1	1	0	0	0	0	0	0	0	0	0	1	1	0
S.A. 2.4.3.3	Climate Indexes / vulnerability for project design	Studies available	1	1	0	0	0	0	0	0	0	0	0	1	1	0
S.A. 2.4.3.4	Arc GIS online: to support PIP Development (method)	Studies available	1	1	0	0	0	0	0	0	0	0	0	1	1	0
S.A. 2.4.3.5	Lessons learned applying tools to PIP	document	1	0	1	0.6	0	0.4	0	0	0	0	0	1	0	1
IR 2.5.	Model of alliance University-Government to support continuity of 'hands-on' training in development of public investment projects with a focus on risk management and climate change context															
A. 2.5.1.	Coordination with MEF to develop diploma on green PIPs for Ancash	Acuerdos	1		1			0	0	1	0	0	0	1	0	1
S.A. 2.5.1.1	Meetings MEF- UNASAM to assess transference	Reports	2	1	1	1	1	0	0	0	0	0	0	2	2	0
S.A. 2.5.1.2	Road Map to train UNASAM in cooperation with MEF	Road Map for training	1	0	1	0.5	0	0.5	0	0	0	0	0	1	0	1
A. 2.5.2.	Development of agreements with the Regional Government and municipalities to participate and support the continuity of Diploma training and elaboration of "green" SNIP projects	Reports	5	0	5			4	0	1	1	0	0	5	1	4
S.A. 2.5.2.1	Present results of Diploma to public sector stakeholders	Presentation s	2		2	0	0	0	0	2	0	0	1	2	1	1
S.A. 2.5.2.2	Identify local governments interested in future diploma (directory)	Organization s	10		10	2	0	4	0	4	0	0	1	10	1	9
S.A. 2.5.2.3	Meetings with prospective stakeholders with interest in diploma	Reports	5		5	0	0	2	0	3	0	0	0	5	0	5

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S.A. 2.5.2.4	Pre-agreements with municipalities, GOR Ancash and agencies to participate in future diploma	Pre-agreements	5	1	4	0	0	0	0	4	0	0	0	5	1	4
S.A. 2.5.2.5	Explore possible sources of funding for diploma (include private sector)	Sources of funding	6	3	3	0	0	1	0	2	0	0	0	6	3	3
A. 2.5.3.	Elaborate lessons learned document regarding the implementation of the Diploma on the "green" and irrigation SNIP projects with risk management in a climate change context	Lessons learned	1		1			1	0	0	0	0	0	1	0	1
S.A. 2.5.3.1	Prepare summary of experience: results and lessons	document	1		1	0	0	1	0	0	0	0	0	1	0	1
S.A. 2.5.3.2	Communicate document to stakeholders (S.A. 2.5.2.1., web, printed)	Media	3		3	0	0	2	0	1	0	0	0	3	0	3
S.A. 2.5.3.3	Prepare short version for funding sources (S.A. 2.5.2.5)	Document	1		1	0	0	0	0	1	0	0	0	1	0	1
IR. 2.6.	SNIP 'green' (grassland and wetland) and irrigation projects formulated in the Diploma have been budgeted and financed															
A. 2.6.1.	Specific technical assistance and follow up of the PIPs elaborated in the Diploma during the process of inscription in SNIP	Projects	6	4	2	0	0	2	0	0	2	0	0	6	6	0
S.A. 2.6.1.1	Meetings: follow up of profiles: authorities, Oficinas Formuladoras (UF) and Oficinas de Presupuesto (OPI)	Reports	4	3	1	0	0	1	1	0	0	0	0	4	4	0
A. 2.6.2.	Public investment projects developed in the Diploma have been assigned funding	PIP profiles funded	6		6			2	2	4	4	0	0	6	6	0
S.A. 2.6.2.1	Technical Assistance to support financing of PIPs (GOR-Ancash, FONIPREL, MIRIEGO, Obras por Impuestos)	Support of Actions	6	1	5	3	3	2	1.2	0	0.8	0	0	6	6	0
S.A. 2.6.2.2	Technical support final PIP document into TDR level	Support Actions	5		5	2	2	3	2	0	1	0	0	5	5	0
A. 2.6.3.	Municipal authorities complete the bidding process to implement "green" and irrigation projects designed in the Diploma	Amount US Dollars leveraged	5.5	1	4.5			0	0	3	3.8	1.5	0	5.5	4.8	0.7
S.A. 2.6.3.1	Technical assistance and follow up with funding sources	Support Actions	6		6	0	3	2	2	4	1	0	0	6	6	0
S.A. 2.6.3.2	Technical assistance and follow up to support public bidding and implementation process	Support Actions	6		6	0	3	2	0	3	1	0	0	5	4	1
IR. 2.7.	Women authorities in local governments have proposed and implemented policy initiatives and projects to reduce climate change impact on women in their municipalities or commonwealths															
A. 2.7.1.	Design training to strengthen the capacities of women serving in municipal councils and female leaders to promote gender inclusion and awareness of climate change impacts on women	Training program	1	1				0	0	0	0	0	0	1	1	0
S.A. 2.7.1.1	Gender strategy for project	Document	1	1	0	0	0	0	0	0	0	0	0	1	1	0
S.A. 2.7.1.2	Training program on gender and climate change for regidoras	Training Program	1	1	0	0	0	0	0	0	0	0	0	1	1	0
S.A. 2.7.1.3	Gender and climate change diagnostic	Diagnostic	3	3	0	0	0	0	0	0	0	0	0	3	3	0
S.A. 2.7.1.4	Summary of experience and lessons	Document	1	0	1	0	0	1	0.2	0	0	0	0.8	1	1	0
S.A. 2.7.1.5	Seek potential funding to replicate experience (MINDES, FONCODES, JUNTOS) or further research and analysis (GRADE)	Sources of funding identified	3	0	3	0	0	1	0	2	0	0	0	3	0	3
A. 2.7.2.	Conduct training program to strengthen the capacities of women serving in municipal councils: focus on gender and public administration (command of planning and budget procedures and state administrative systems)	Women trained	50	50				0	0	0	0	0	0	50	50	0
S.A. 2.7.2.1	Training women regidoras in fundamentals of public administration	Women trained	50	50	0	0	0	0	0	0	0	0	0	50	50	0
S.A. 2.7.2.3	Technical assistance to support regidoras on demand	Reports	2	2	0	0	0	0	0	0	0	0	0	2	2	0

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S.A. 2.7.2.4	Measurement of self-efficacy	% self-efficacy	Línea de base	Línea de base	1	0	0.5	0	0	1	0.5	0	0	1	1	0
A. 2.7.3.	Conduct training of women councilors and local leaders in Gender and Climate Change: developing small projects lead by women as a learning tool on climate change adaptation actions	Women trained	62	32	30	10	0	20	0	0	0	0	0	62	32	30
S.A. 2.7.3.1	Training in gender and climate change	Women trained	90	60	30	30	30	0	0	0	0	0	0	90	90	0
S.A. 2.7.3.2	Gender diagnostic and climate change	Diagnostic	1	1	0	0	0	0	0	0	0	0	0	1	1	0
S.A. 2.7.3.3	Grassroots develop small project ideas for adaptation	Grassroots	5	5	5	0	0	0	0	0	0	0	0	5	5	0
S.A. 2.7.3.4	Implement small adaptation actions	Adaptation actions	5	5	0	0	0	0	0	0	0	0	0	5	5	0
S.A. 2.7.3.5	Summary of experience and lessons	Document	1	0	1	0	0	0	0	1	1	0	0	1	1	0
A. 2.7.4.	Technical assistance to women groups to prepare new initiatives on climate change adaptation based on their learning experience with small climate change actions	Local initiatives approved	5	5	0	0	0	0	0	0	0	0	0	5	5	0
S.A. 2.7.4.1	Support A regidoras and grassroots to engage in participatory budget	Reports	8	8	0	0	0	0	0	0	0	0	0	8	8	0
S.A. 2.7.4.2	Support grassroots groups prepare documents for participatory budget	Documents: project summary prepared	5	5	0	0	0	0	0	0	0	0	0	5	5	0
S.A. 2.7.4.3	Present resulting documents to participatory budget	Documents: project summary delivered	5	5	0	0	0	0	0	0	0	0	0	5	5	0
S.A. 2.7.4.4	Regidoras facilitate insertion of grassroots interests in municipality budgets	Documents: project summary approved	5	3	2	0	2	0	0	0	0	0	0	5	5	0
IR 2.8.	The network of women councilors (Red de Regidoras) disseminates its experience with national support groups or national agencies															
A. 2.8.1.	Technical assistance as required to support the elaboration of gender-sensitive policies for climate change adaptation	Policies	3		3	0	0	3	0	0	0	0	0	3	0	3
S.A. 2.8.1.1	Present results MIMP, FONCODES, JUNTOS	Presentation	4		4	0	0	2	0	2	0	0	0	4	0	4
S.A. 2.8.1.2	Meetings with Regidoras network to discuss policy initiatives concerning women, vulnerable population and climate change	Reports	2		2	0	0	2	0	0	0	0	0	2	0	2
S.A. 2.8.1.3	Identify National level groups of women to support process	Women groups	2		2	0	0	1	0	1	0	0	0	2	0	2
S.A. 2.8.1.4	Support Regidoras designing policy proposals	Policy Proposals	3		3	0	0	0	0	3	0	0	0	3	0	3
S.A. 2.8.1.5	Conference to present policy initiatives	Conference	1		1	0	0	0	0	1	0	0	0	1	0	1
A. 2.8.2.	Documentation of experience of the women working on gender and climate change adaptation through "Participatory Video" methods	Videos	3		3	0	0	3	0	0	3	0	0	3	3	0
S.A. 2.8.2.1	Plan for participatory video	Plan	1	1		0	0	0	0	0	0	0	0	1	1	0
S.A. 2.8.2.2	Trained regidoras and local groups on participatory video making	Workshops	4	4	0	0	0	0	0	0	0	0	0	4	4	0
S.A. 2.8.2.3	Produce videos	Videos	3	3	0	0	0	0	0	0	0	0	0	3	3	0
S.A. 2.8.2.4	Edit video	Video	3		3	3	3	0	0	0	0	0	0	3	3	0
S.A. 2.8.2.5	Disseminate video	videos	3		3	3	0	0	0	0	3	0	0	3	3	0

R3. Improved capacities of communities to adapt to climate change, improve the health of ecosystems and develop infrastructures that regulate water and sustain livelihoods

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R3	Improved capacities of communities to adapt to climate change, improve the health of ecosystems and develop infrastructures that regulate water and sustain livelihoods																
IR. 3.1.	Institutionalized Mechanisms for Retribution of Ecosystems Services (MRSE) with recognized and trained advocacy group																
A. 3.1.1.	Formation of a recognized, informed, Advocacy Group ... to promote MRSE	Work plan	1	1	0			0	0	0	0	0	0	1	1	0	
S.A. 3.1.1.1	Constitution of GI	Meetings	2	2	0	0	0	0	0	0	0	0	0	2	2	0	
S.A. 3.1.1.2	GI organization and objectives	Report	2	2	0	0	0	0	0	0	0	0	0	2	2	0	
S.A. 3.1.1.3	GI action plan short term and long term	Work Plan	2	2	0	0	0	0	0	0	0	0	0	2	2	0	
S.A. 3.1.1.4	GI formed and recognized (SERNANP or MINAM)	Ordinance	1	1	0	0	0	0	0	0	0	0	0	1	1	0	
A. 3.1.2.	Strengthening of the MRSE Advocacy Group	Members trained	15	10	5	5	0	0	0	0	0	0	0	15	10	5	
S.A. 3.1.2.1	Initial meetings to establish group (MINAM, TNC, Pasantia Moyobamba, SUNASS)	Report	8	6	2	1	1	1	0	0	1	0	0	8	8	0	
S.A. 3.1.2.2	Training workshop on MRSE	Workshop	3	1	2	1	0	1	2	0	0	0	0	3	3	0	
S.A. 3.1.2.3	Participate in events MRSE to advance training	Event	4	4	0	0	0	0	0	0	0	0	0	4	4	0	
S.A. 3.1.2.4	Visits to MRSE sites in Peru	Exchange	2	1	1	0	0	1	1	0	0	0	0	2	2	0	
S.A. 3.1.2.5	Meetings by GI	Report	3	3	0	0	0	0	0	0	0	0	0	3	3	0	
S.A. 3.1.2.6	Identify sources of funding for MRSE (directory)	Sources of funding	5	4	1	0	0	1	1	0	0	0	0	5	5	0	
S.A. 3.1.2.7	Contact potential contributors provide documentation	Contacts	5	4	1	0	0	1	1	0	0	0	0	5	5	0	
A. 3.1.3.	Integration of MRSE in management of Huascan Biosphere Reserve Master Plan (MP)	Master Plan reported	1	1				0	0	0	0	0	0	1	1	0	
S.A. 3.1.3.1	Advocacy Group participates in the MPI	Report	1	1		0	0	0	0	0	0	0	0	1	1	0	
IR. 3.2.	The Advocacy Group (GI) has documented scenarios that have baseline studies to support community projects for water security																
A. 3.2.1.	Definition of key actors, water suppliers and water users in the area of project implementation	MRSE system identified	1	1	0	0	0	0	0	0	0	0	0	1	1	0	
S.A. 3.2.1.1	Map MRSE allies in the RBH	Document	1	1	0	0	0	0	0	0	0	0	0	1	1	0	
S.A. 3.2.1.2	Identify cases for cooperation: conservationists - contributors	Report	1	1	0	0	0	0	0	0	0	0	0	1	1	0	
A. 3.2.2.	Definition of priority areas of intervention for the Advocacy Group in the project area of implementation	Priority Areas	2	2	0	0	0	0	0	0	0	0	0	2	2	0	
S.A. 3.2.2.1	Study situation of RBH ecosystems	Document	2	2	0	0	0	0	0	0	0	0	0	2	2	0	
S.A. 3.2.2.2	Identify priority for MRSE	Sites	2	2	0	0	0	0	0	0	0	0	0	2	2	0	
S.A. 3.2.2.3	Meetings to select sites	Report	4	4	0	0	0	0	0	0	0	0	0	4	4	0	
IR. 3.3	Potential stakeholders of MRSE willing to develop cooperation agreements in the RBH																
A. 3.3.1.	Sensitize and train private stakeholders that are beneficiaries of ecosystem services (SE) in the MRSE strategy	Institutions sensitized	20	10	10			0	0	10	0	0	0	20	10	10	

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S.A. 3.3.1.1	Develop opportunities SUNASS, EPS and others MRSE	Letters commitment	2	1	1	1	1	0	0	0	0	0	0	2	2	0
S.A. 3.3.1.2	Awareness raising events	Events	3	1	2	1	1	0	1	1	0	0	0	3	3	0
S.A. 3.3.1.3	Meetings with private sector promote MRSE	Meetings	3	2	1	0	0	1	0	0	1	0	0	3	3	0
S.A. 3.3.1.4	Training on MRSE with diverse stakeholders	People trained	10	1	9	0	0	0	0	0	1	9	1	10	3	7
A. 3.3.2.	Sensitize and train key communities on the MRSE strategy ...	Communities sensitized	4		4			2	2	2	0	0	0	4	2	2
S.A. 3.3.2.1	Plan and implement communication activities	Events	4	3	1	0	0	1	1	0	0	0	0	4	4	0
S.A. 3.3.2.2	Training on MRSE	People trained	10	10		0	0	0	0	0	0	0	0	10	10	0
IR. 3.4.	MRSE management committees formed in defined priority areas of the RBH															
A. 3.4.1.	Connect upland communities... to discuss the MRSE strategy	Sub watersheds	2		2	0	0	0	0	1	0	1	0	2	0	2
S.A. 3.4.1.3	Management tools for MRSE committee (reglamento)	Management tools (reglamento)	2		2	0.25	0.25	1	1	0.75	0.75	0	0	2	2	0
IR. 3.5.	Diagnostic information to support development of adaptation actions (IAPS, small projects, innovative tools for decision making)															
A. 3.5.1.	Conduct Rapid Rural Appraisals ...	Documents	3	3				0	0	0	0	0	0	0	0	
S.A. 3.5.1.1	Gather secondary information	Reports	2	2	0	0	0	0	0	0	0	0	0	2	2	0
S.A. 3.5.1.2	Field work: identify development objectives and climate change	Reports	3	3	0	0	0	0	0	0	0	0	0	3	3	0
S.A. 3.5.1.3	Implement workshops with MMs	Workshops	3	3	0	0	0	0	0	0	0	0	0	3	3	0
S.A. 3.5.1.4	Diagnostic for each MMI	Diagnostic	3	3	0	0	0	0	0	0	0	0	0	3	3	0
A. 3.5.2.	Perform analysis of local perceptions of vulnerability to climate change...	Documents	1	1		0	0	0	0	0	0	0	0	0	0	0
S.A. 3.5.2.1	Survey of perceptions of local risk and climate change in 4 pilot sites	Survey	300	300	0	0	0	0	0	0	0	0	0	300	300	0
S.A. 3.5.2.2	Map risk perception (qualitative with focal groups)	Workshops	6	6	0	0	0	0	0	0	0	0	0	6	6	0
S.A. 3.5.2.3	Final Document	Document	1	1	0	0	0	0	0	0	0	0	0	1	1	0
A. 3.5.3.	Preparation on synthesis and orientation documents for Municipal Common-wealths ...	Documents	4	2	2	1	0	1	0	0	2	0	0	4	4	0
S.A. 3.5.3.1	Summary Document of territory and climate change in each MM	Document	3	2	1	1	1	0	0	0	0	0	0	3	3	0
S.A. 3.5.3.2	Prepare interactive maps in ESRI Arc GIS online	Map	8	4	4	1	1	3	2	0	1	0	0	8	8	0
S.A. 3.5.3.3	Share information with SIAR and others	Link	3		3	1	0	2	2	0	1	0	0	3	3	0
IR 3.6.	Communities have established Participatory Action Research actions (IAP) at low cost and on priority issues that contribute to adaptation to climate variability and change															
A 3.6.1.	Supporting the development of Participatory Research actions (IAP) ...	Persons trained	70	35	35			18	7	17	20	0	0	70	62	8
S.A. 3.6.1.1	Contextual analysis	Documents on context	3	2	1	0	0	0	0	1	0	0	0	3	2	1

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S.A. 3.6.1.2	IAP process agreed with communities	Agreements	4	4		0	0	0	0	0	0	0	0	4	4	0
S.A. 3.6.1.3	Train local researchers through implementation actions (3.6.2)	People trained	70	50	20	0	0	0	7	20	20	0	0	70	77	-7
A. 3.6.2.	Implementation of IAPs ...	IAP implemented	14	11	3	2	2	1	1	0	0	0	0	14	14	0
S.A. 3.6.2.1	Implement IAPs in 7 steps	IAP	14	11	3	1	1	1	1	1	1	0	0	14	14	0
S.A. 3.6.2.2	Farmer-to-Farmer exchanges	Reports	8	1	7	2	1	3	4	2	2	0	0	8	8	0
S.A. 3.6.	Share IAP results: communities and local governments	Exchange plans	2	0	2	2	2	0	0	0	0	0	0	2	2	0
SA. 3.6.2.4	Summary document : lessons	Document	1		1	1	0.5	0	0	0	0.5	0	0	1	1	0
IR 3.7.	Research results have been shared and communicated among community groups in the area of influence															
A. 3.7.1.	Validation and dissemination of the results of IAP through 'Participatory Video'	Videos	2		2	1	1	1	1	0	0	0	0	2	2	0
S.A. 3.7.1.1.	Plan for 'Video Participativo'	Plans	1	1		0	0	0	0	0	0	0	0	1	1	0
S.A. 3.7.1.2	Train local groups on 'Video Participativo'	Workshops	2	0.5	1.5	0	1.5	1.5	0	0	0	0	0	2	2	0
S.A. 3.7.1.3	Prepare 'Video Participativo'	videos	2		2	0	1	2	1	0	0	0	0	2	2	0
S.A. 3.7.1.4	Edit video: prepare copies	videos	2		2	0	0	2	2	0	0	0	0	2	2	0
S.A. 3.7.1.5	Organize events with communities to share results	Reports	3		3	0	0	3	0	0	3	0	0	3	3	0
IR 3.8.	Communities and community-based groups have defined their development objectives, climatic and non-climatic threats to their territories and means of livelihood															
A. 3.8.1.	Communities and community-based organizations in pilot sites have leaders trained...	Projects	10	10	0	0	0	10	10	0	0	0	0	10	10	0
S.A. 3.8.1.1	Identify communities interested	Communities	10	10	0	0	0	0	0	0	0	0	0	10	10	0
A. 3.8.2.	Elaborate Local Adaptation Plans of Action (PAAL) identifying a project portfolio in pilot sites	Plans	7	7		0	0	7	7	0	0	0	0	7	7	0
S.A. 3.8.2.1	Agreements with communities to engage in local plans of adaptation (PDL)	Agreements	7	7	0	0	0	0	0	0	0	0	0	7	7	0
S.A. 3.8.2.2	Socialize results of vulnerability analysis	Event	3	0	3	0	0	0	0	3	0	0	3	3	3	0
S.A. 3.8.2.3	Apply PDL method	Workshops	7	7		0	0	0	0	0	0	0	0	7	7	0
IR 3.9.	Package of innovative tools to support decision-making and climate proofing in the design of community projects developed															
A. 3.9.1.	Elaboration of community handbooks ('Cuadernos Metodológicos')...	Training guides	7	3	4	2	1	2	0	0	2	0	0	7	6	1
S.A. 3.9.1.1	IAPs and climate change	Methodology	1	0.25	0.75	0.75	0.75	0	0	0	0	0	0	1	1	0
S.A. 3.9.1.2	Rapid Rural Appraisal and climate change	Methodology	1	1		0	0	0	0	0	0	0	0	1	1	0
S.A. 3.9.1.3	Methodology for planning (PDL)	Methodology	1	1	0	0	0	0	0	0	0	0	0	1	1	0
S.A. 3.9.1.4	Identification of ancestral technologies	Methodology	1	1		0	0	0	0	0	0	0	0	1	1	0
S.A. 3.9.1.5	ArcGis Online: applications to understand local context	Methodology	1	0.5	0.5	0	0	0.5	0.5	0	0	0	0	1	1	0
S.A. 3.9.1.6	Criteria to select adaptation projects	Methodology	1	0.8	0.2	0	0	0.2	0	0	0	0	0	1	0.8	0.2
S.A. 3.9.1.7	Set of tools packaged	Set of tools	1		1	0	0	1	0	0	0	0	0	1	0	1

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IR 3.10.	Community projects focusing on reducing climate hazards and/or adaptation measures implemented in pilot sites (if small scale with project funds and if larger scale presented to national funding sources)																
A. 3.10.1.	Selection of priority adaptation projects....	Projects	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0
S.A. 3.10.1.1	Identify projects in PDLs	Projects identified	5	5	0	0	0	0	0	0	0	0	0	5	5	0	
S.A. 3.10.1.2	Identify best small projects to finance by project	Projects identified	5	5	0	0	0	0	0	0	0	0	0	5	5	0	
S.A. 3.10.1.3	Identify best small projects to finance by others (e.g. MINAGRI, PSI, FONCODES, AGRORURAL)	Projects identified	5	5	0	0	0	0	0	0	0	0	0	5	5	0	
3.10.2.	Implementation of community local adaptation actions with TMI project funds.	Projects	4	0	4	0	0	2	2	2	2	0	0	4	4	0	
S.A. 3.10.2.1	Prepare protocol for implementation	Protocol	1	0.5		0	0	0.5	0	0	0	0	0.3	1	0.8	0.2	
S.A. 3.10.2.2	Agreements with communities	Agreement	5	4	1	1	1	0	0	0	0	0	0	5	5	0	
S.A. 3.10.2.3	Training on protocols	Document	8	5	3	2	3	1	0	0	0	0	0	8	8	0	
S.A. 3.10.2.4	Implement small projects	Workshop	6	2	4	0	4	4	0	0	0	0	0	6	6	0	
S.A. 3.10.2.5	Document results and lessons	Document	1		1	0	0	1	0	0	1	0	0	1	1	0	
A. 3.10.3.	Implementation by Government of Peru agencies working in rural development of priority adaptation projects...	Projects	3	0	3	2	0	1	2	0	1	0	0	3	3	0	
S.A. 3.10.3.1	Revise agency protocols (share lessons)	Protocol	3	0	3	3	0	0	3	0	0	0	0	3	3	0	
S.A. 3.10.3.2	Agreements with communities	Agreements	3	0	3	3	0	0	2	0	1	0	0	3	3	0	
S.A. 3.10.3.3	Implementation	Under or initiating implementation	3	0	3	2	0	1	2	0	1	0	0	3	3	0	
S.A. 3.10.3.4	Document results and lessons	Document	1	0	1	0	0	0	0	1	0	0	0.5	1	0.5	0.5	
IR 3.11.	Financial institutions have incorporated, in its portfolio of funding, projects developed with communities under an ACC focus																
A. 3.11.1.	Identification of funding sources for communities	Agreement	3	0	3	0	0	2	1	1	0	0	0	3	1	2	
S.A. 3.11.1.1	Explore with agencies (MINAGRI-PLANGRACC, PSI, AGRORURAL, NAIP, FONCODES) interest to support PDL projects	Agreement to cooperate	1		1	0	0.25	1	0.75	0	0	0	0	1	1	0	
S.A. 3.11.1.3	Provide support to present projects to agencies	Reports	3	3	0	0	0	0	0	0	0	0	0	3	3	0	
S.A. 3.11.1.4	Seek funding sources for community projects (water quality remediation, restore ancestral technology, irrigation)	Sources of funding	1	0.5	0.5	0.5	0	0	0.25	0	0	0	0.25	1	1	0	
IR. 3.12.	Technological institutes (Institutos Tecnológicos) incorporate research methods and professional training contextualized for the implementation of small projects and IAP with an adaptation to climate change (ACC) approach																
A. 3.12.1.	Develop agreements with stakeholders to strengthen Technological Institutes ...	Support group operating	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
S.A. 3.12.1.1	Discuss scope of cooperation with Institutos and Ancash DREA	Agreement	1	1	0	0	0	0	0	0	0	0	0	1	1	0	
A. 3.12.2.	Training of teachers and students on tools...	People trained	20	10	10			10	0	0	10	0	0	20	20	0	
S.A. 3.12.2.2	Implement courses	People trained	20	10	10	20	20	0	0	0	0	0	0	20	20	0	
S.A. 3.12.2.4	Document results and lessons	Document	1		1	1	1	0	0	0	0	0	0	1	1	0	

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A. 3.12.3.	Implementation of climate proofed, small scale projects by the Technological Institutes	IAP projects	1		1			1	1	0	0	0	0	1	1	0
S.A. 3.12.3.1.	Institutos Tecnológicos implement small projects	IAP projects	1	0.5	0.5	0	0.5	0.5	0	0	0	0	0	1	1	0
S.A. 3.12.3.2	Technical assistance during implementation	Reports	3	1	2	2	1	0	1	0	0	0	0	3	3	0

Annex B. Success Stories



COMUNICAR PARA SERVIR A LA POBLACIÓN



Mery Alindia ha recogido las mejores experiencias en cuanto a desarrollar las capacidades de los pobladores frente al cambio climático, por ello ha visto importante plasmarlo en su tesis para la obtención de su título profesional como comunicadora.

Mery Alindia Valverde Nivin, bachiller en ciencias de la comunicación de la Universidad Nacional "Santiago Antúnez de Mayolo" –UNASAM, participó del programa de voluntariado, promovido por el Instituto de Montaña y USAID desde agosto del 2015.

A sus 23 años de edad, y como una de las estudiantes más aplicadas en su promoción, decidió ingresar a este programa de voluntariado motivada por la labor social que se desarrollaba "Me motivó cuando las compañeras me contaron las experiencias que habían vivido y yo decidí presentarme y desde entonces todo ha sido gratificante he aprendido mucho, pero lo que más me ha llamado la atención fue cuando tuve que producir un video sobre biorremediación, y al entrevistarme con los beneficiarios fue impresionante descubrir de cómo ha cambiado positivamente la vida de la población para el cuidado del agua".

"Quizá cualquier persona no podría entenderlo de manera sencilla, pero para los campesinos el tener el agua es su vida misma, yo lo entiendo porque nací en Coyllur, una comunidad campesina que al igual que otras, tenemos problemas de contaminación del recurso hídrico. Por ello estoy impulsando a mis padres para que organicemos al pueblo para ver la manera de remediar el agua"

"En todo este tiempo mi labor de apoyo de comunicación como complemento a lo desarrollado por los especialistas, me ha hecho sentir que he aportado en todos los procesos de adaptación al cambio climático con las poblaciones rurales, universidad y la población de las mancomunidades, gracias por haberme dado esta oportunidad porque me ha ayudado no sólo de manera personal, sino además he tomado conciencia que desde donde yo me encuentre debo aportar con el cuidado del medio ambiente y que existen formas y estrategias de lograrlo, mejor aún de manera organizada".

Mery Alindia viene desarrollando su tesis incluyendo el enfoque de gestión de riesgos y adaptación al cambio climático, estudios que han sido tomados durante el voluntariado en el Instituto de Montaña.



SOY ALCALDE POR VOCACIÓN Y DECISIÓN



"Recuay es una tierra de hombres y mujeres luchadores, ellos son el impulso de trabajar por lo que nos da vida... El agua"

Milton Duck León Vergara (46), no sólo es uno de los alcaldes más jóvenes de Ancash, sino el único en la historia regional, quien viene asumiendo por tercera vez y en elecciones democráticas, la alcaldía de la provincia de Recuay. Es en esta tercera gestión que con mayor ahínco impulsa la gestión del recurso hídrico y adaptación al cambio climático, junto a la población de las comunidades rurales de su jurisdicción.

"Me vi obligado a tener aspiraciones sociales, por herencia de mi padre, a quien le quitaron la vida, cuando yo era un niño, él siempre nos inculcó el trabajo solidario y me considero su sucesor".

"Hemos ganado por amplia mayoría en estas tres últimas elecciones y como máxima autoridad provincial, me siento comprometido con mi pueblo, más aún cuando veo el nivel de preocupación y organización, como el caso de los Investigadores Campesinos de Canrey Grande, quienes han generado e impulsado sistemas de biorremediación frente al cambio climático".

"En Recuay carecemos de agua y en calidad de Alcalde con apoyo de la población estamos gestionando proyectos de siembra y cosecha de agua, impulsamos la investigación campesina, organizaciones reconocidas con resolución de alcaldía".

La Municipalidad Provincial de Recuay es integrante de la Mancomunidad Municipal Tres Cuencas, formada con la finalidad de promover la gestión del recurso hídrico y la adaptación al cambio climático.

En la actualidad junto a alcaldes de municipalidades distritales de su jurisdicción vienen destinando fondos para la formulación de proyectos de inversión pública verdes, con la finalidad de presentarlos a nivel nacional para el financiamiento y ejecución posterior.

El principal interés es que la población de Recuay no sufra la escasez de agua ni tampoco se vean afectados sus medios de vida, refiere Milton Duck.